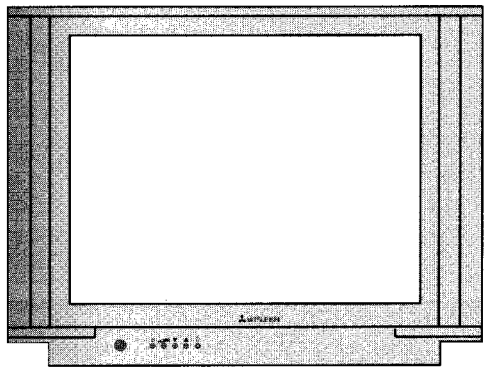
06-1997

MITSUBISHI Service Manual

Colour TV



C25S7B C28S7B
C25C7B C28C7B
C25S7L C28S7L

SPECIFICATIONS

Reception System	CCIR-I PAL/SECAM	
Reception Frequency	UHF 470MHz~862MHz VHF 47~170MHz (VB1) VHF 170~448MHz (VB2)	(C25S7L & C28S7L only)
Stereo System	NICAM	
Mains Input	AC 230V, 50Hz	
Power Consumption	11 8W 124W	(C25S7B, C25C7B & C25S7L) (C28S7B, C28C7B & C28S7L)
Aerial Input	75Ω	
Intermediate Frequency	Video: 39.5MHz Sound: 33.5MHz	
Audio Output (Music Power)	12W + 12W (left + right) 12W (sub-woofer – C28S7B, C28C7B & C28S7L only)	
Speaker	2 x 11.5 x 5cm (left + right) ø10.5cm	(sub-woofer – C28S7B, C28C7B & C28S7L only)
Chassis	EE6	
Picture Tube	A59ECF50X05 59cm(V)/25" (C25S7B/L & C25C7B) A66EHJ43X01 66cm(V)/28" (C28S7B/L & C28C7B)	
Cabinet dimensions (approx. W x D x H)	68cm x 45cm x 52cm (C25S7B, C25C7B & C25S7L) 74cm x 47cm x 56cm (C28S7B, C28C7B & C28S7L)	
Weight (approx. Not incl. stand)	26.2Kg 32.5Kg	(C25S7B, C25C7B & C25S7L) (C28S7B, C28C7B & C28S7L)

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MITSUBISHI ELECTRIC

CONTENTS

1	**GENERAL NOTES**	**3**
1.1	SAFETY PRECAUTIONS	3
1.1.1	General Warnings	3
1.1.2	X-RAY Warning	3
1.1.3	Leakage Current Check	3
1.2	CONTROLS AND CONNECTORS	4
1.2.1	Front Panel	4
1.2.2	Rear Panel	4
1.3	REQUIRED EQUIPMENT	5
1.3.1	Measuring equipment	5
1.3.2	Test signals	5
1.4	CONNECTING LEADS	5
1.4.1	Identification	5
1.4.2	Lead dressing	6
2	**SERVICE ADJUSTMENT PROCEDURES**	**7**
2.1	INTRODUCTION	7
2.1.1	Basic adjustment procedure	7
2.1.2	Software diagnostics system	7
2.2	EEPROM DATA	8
2.2.1	Initialising the EEPROM	8
2.2.2	OPTIONS and VCJ code descriptions	9
2.3	VIF CIRCUITS	10
2.3.1	RF-AGC	10
2.4	POWER CIRCUIT	10
2.4.1	B+ VOLTAGE	10
2.5	DEFLECTION CIRCUITS	10
2.5.1	CRT BIAS	10
2.5.2	VERTICAL BREATHING CORRECTION	10
2.5.3	HORIZONTAL CENTRE	10
2.5.4	HORIZONTAL WIDTH	11
2.5.5	EAST-WEST PCC	11
2.5.6	HEIGHT AND LINEARITY	11
2.5.7	VERTICAL CENTRE	11
2.6	CRT CIRCUITS	12
2.6.1	WHITE BALANCE	12
2.6.2	FOCUS	12
2.7	VIDEO CIRCUITS	12
2.7.1	BRIGHTNESS AND CONTRAST	12
2.7.2	COLOUR OUTPUT	13
3	**OPERATION GUIDE**	**14**
4	**PARTS LIST**	**16**
4.1	NOTES	16
4.1.1	Model-specific parts	16
4.1.2	Ordering	16
4.1.3	Safety	16
4.1.4	Component tolerances	16
4.2	SERVICE PARTS LIST	16
5	**PCB LAYOUT DIAGRAMS**	**24**
6	**IC BLOCK DIAGRAMS**	**31**
7	**SCHEMATIC DIAGRAMS**	**34**
7.1	NOTES	34
7.1.1	General	34
7.1.2	Servicing Precautions	34
7.1.3	Component Information	34
	SCHEMATIC DIAGRAMS	INSIDE BACK COVER

1 GENERAL NOTES

1.1 SAFETY PRECAUTIONS

1.1.1 General Warnings

1. Observe any cautions and safety related notes located inside the receiver cabinet and on the receiver chassis.
2. An isolation transformer should be used between the television receiver and the AC power supply point before any test or servicing is performed on a LIVE chassis television receiver.
3. Operation of these receivers outside the cabinet or with the back cover removed involves a shock hazard from the receiver power supplies. Work on the receiver should not be attempted by anyone who is not familiar with the precautions necessary when working on high voltage equipment.
4. Do not install, remove or handle the picture tube unless shatter-proof goggles are worn. People not so equipped should be kept away while the picture tube is being handled. Keep the picture tube away from the body while handling.
5. When service is required, observe the original lead dressing. Extra precaution should be given to assure correct lead dressing in the high voltage area. Where a short-circuit has occurred, replace those components that indicate evidence of overheating.

1.1.2 X-RAY Warning

Under fault conditions the CRT can generate X-rays. The use of a lead apron is recommended if available.

When replacing the CRT only use the designated replacement part as it is a critical component with regard to X-rays. No high-voltage adjustments are provided.

1.1.3 Leakage Current Check

Before returning the receiver to the customer it is recommended that the leakage current be measured according to the following method:

With the AC plug removed from the AC source, place a jumper across the live and neutral pins. Turn the receiver AC switch on. Using an OHM-METER, connect one lead to the shorted AC plug and touch the other lead to each exposed metal part (antennas, screw heads, etc.) in turn, particularly any exposed metal part having a return path to the chassis. Any resistance below a value of 1 MEG OHM indicates an abnormality which requires corrective action.

1.2 CONTROLS AND CONNECTORS

1.2.1 Front Panel

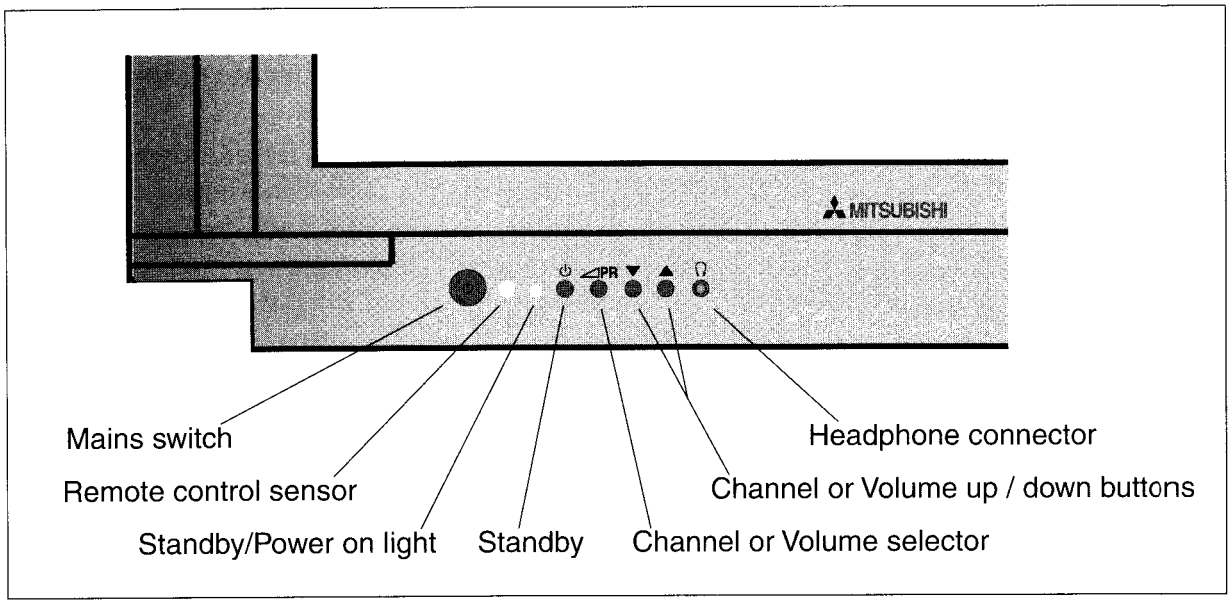


fig. 1.2A Front panel controls

1.2.2 Rear Panel

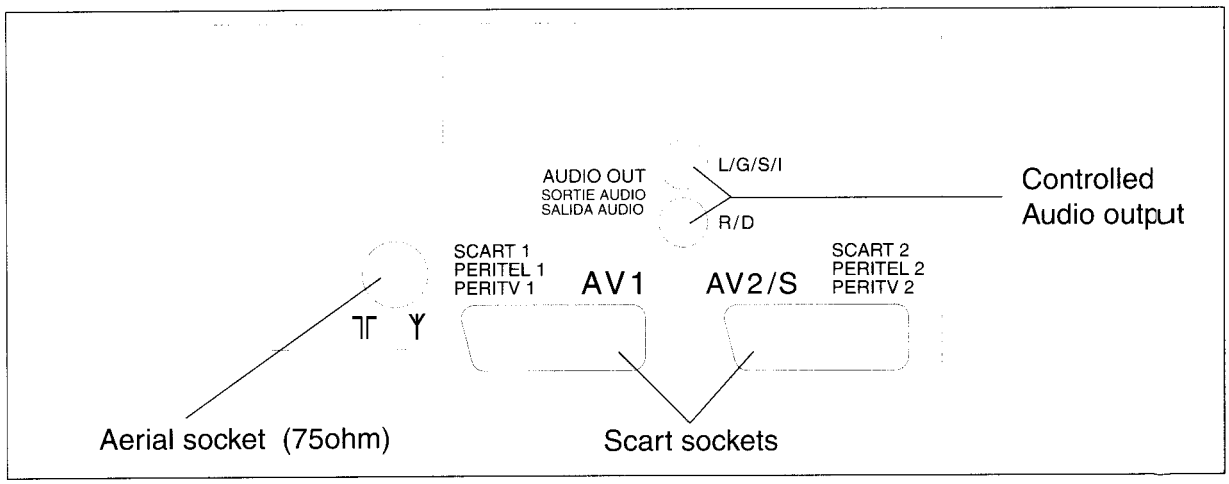


fig. 1.2B Rear panel connectors

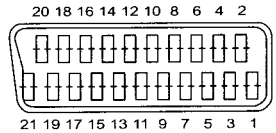


fig. 1.2C Scart socket pin details

SCART SOCKET 1			SCART SOCKET 2	
Signal	**Spec.**	**Pin**	**Signal**	**Spec.**
Audio out R	0.5V / 10kΩ	1	Audio out R	0.5V / 10kΩ
Audio in R	0.5V / 10kΩ	2	Audio in R	0.5V / 10kΩ
Audio out L	0.5V / 10kΩ	3	Audio out L	0.5V / 10kΩ
Audio Earth		4	Audio Earth	
Blue Earth		5	Blue Earth	
Audio in L	0.5V / 10kΩ	6	Audio in L	0.5V / 10kΩ
Blue in	0.7Vpp / 75Ω	7	Blue in	0.7Vpp / 75Ω
Function switch		8	Function switch	
Green Earth		9	Earth	
Not connected		10	Not connected	
Green in	0.7Vpp / 75Ω	11	Not connected	
Not connected		12	Not connected	
Red Earth		13	Chroma Earth	
Blanking Earth		14	Not connected	
Red in	0.7Vpp / 75Ω	15	Chroma in	0.3Vpp (burst) 75Ω
Blanking		16	Not connected	
Video out Earth		17	Video out Earth	
Video in Earth		18	Luminance Earth	
Video out	1Vpp / 75Ω	19	Video out	1Vpp / 75Ω
Video in	1Vpp / 75Ω	20	Luminance in	1Vpp / 75Ω
Socket Earth		21	Socket Earth	

1.3 REQUIRED EQUIPMENT

1.3.1 Measuring equipment

- Oscilloscope
- Signal generator
- DC milliammeter
- DC voltmeter
- Frequency counter (optional)

1.3.2 Test signals

- PAL Cross-hatch, Black raster and White raster
- PAL G-card
- PAL Colour-bar with the specification as in figure 1.3A below:

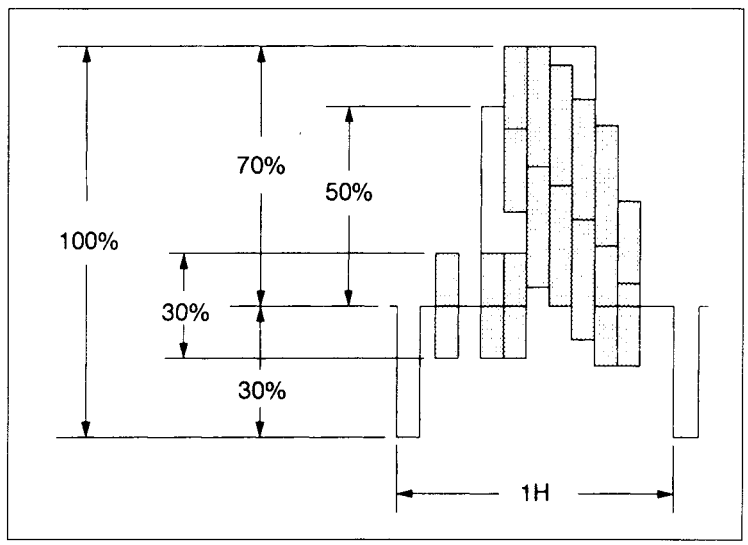


fig. 1.3A Split-field colour bars (with 100% window)

1.4 CONNECTING LEADS

1.4.1 Identification

Connecting leads are generally identified by the colours of their wires according to figure 1.4A below:

Colour	Code
BLACK	A
BROWN	B
RED	C
ORANGE	D
YELLOW	E
GREEN	not used
BLUE	G
VIOLET	H
GREY	J
WHITE	K
PINK	L

Example:

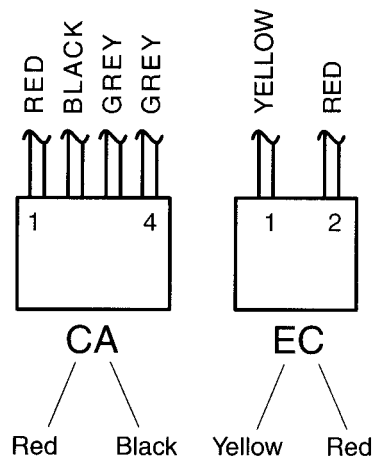


fig. 1.4A Connecting lead identification chart

1.4.2 Lead dressing

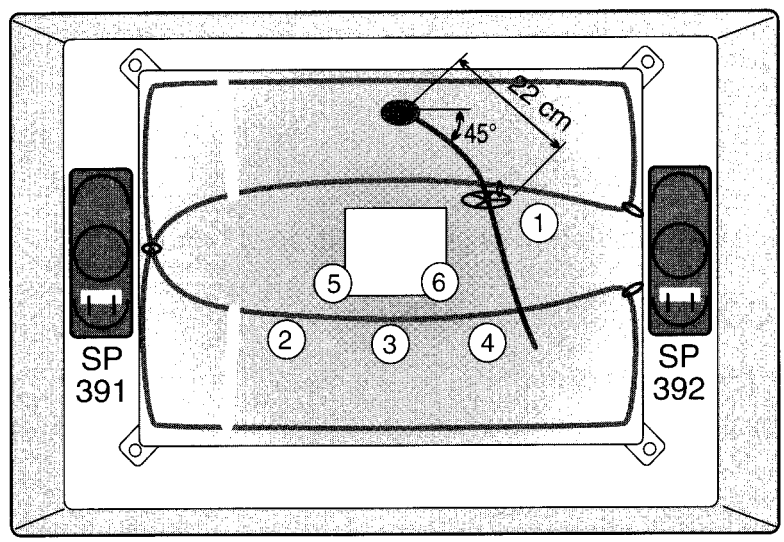
Leads must be dressed as shown in table 1.4B and the diagram (fig. 1.4C) below. The leads are routed or clamped so that they do not come close to any heat generating or high-tension parts.

The anode lead wire is routed such that no tension is applied to the anode cap. If the mounting angle of the anode cap and the route of the anode lead wires are changed, return them to the initial angle and route.

Lead	Clamp No		Lead	Clamp No	
	25"	28"		25"	28"
ANODE	1	1	DY	15**	15**
FOCUS	18*	18*	FA	9, 10	9, 10
SCREEN	18*	18*	FC	9, 10	9, 10
BA	17, 16**	17, 16**	GA	5, 14, 21	5, 14, 21
DA	9, 7, 8 *and...*	9, 7, 8 *and...*	KA	13, 12	13, 12
	3, 2* (SP391)	3, 2* (SP391)	KB	11	11
	or 4 (SP392)	*or* 3, 4 (SP392)	KK	11	11
DD	N/A	20, 19	LB	17, 16**, 6*	17, 16**, 6
DE	N/A	21, 14	SC	5*	5
DM	N/A	20, 21			

* = SINGLE LOOP, ** = DOUBLE LOOP

table 1.4B
Lead-dressing details



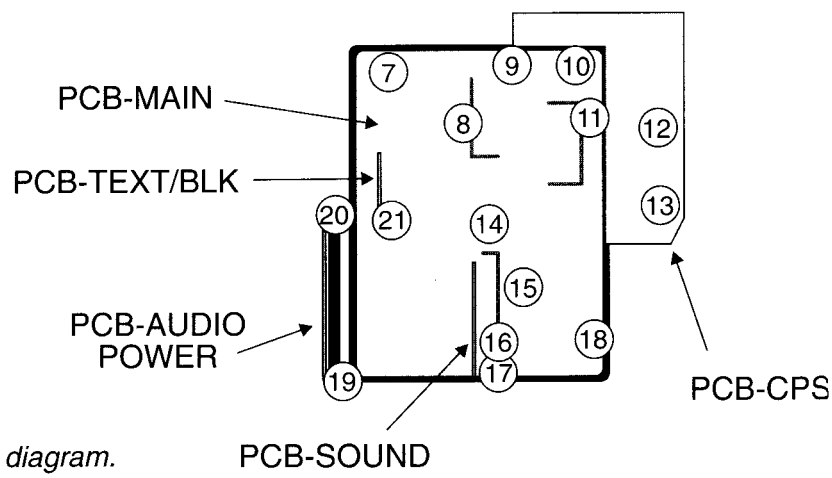


fig. 1.4C Lead-dressing diagram.

2 SERVICE ADJUSTMENT PROCEDURES

2.1 INTRODUCTION

Most service adjustments to these models are made using the remote control (figure 2.1A) with the TV in service mode. The adjustment data is stored in an EEPROM (IC702).

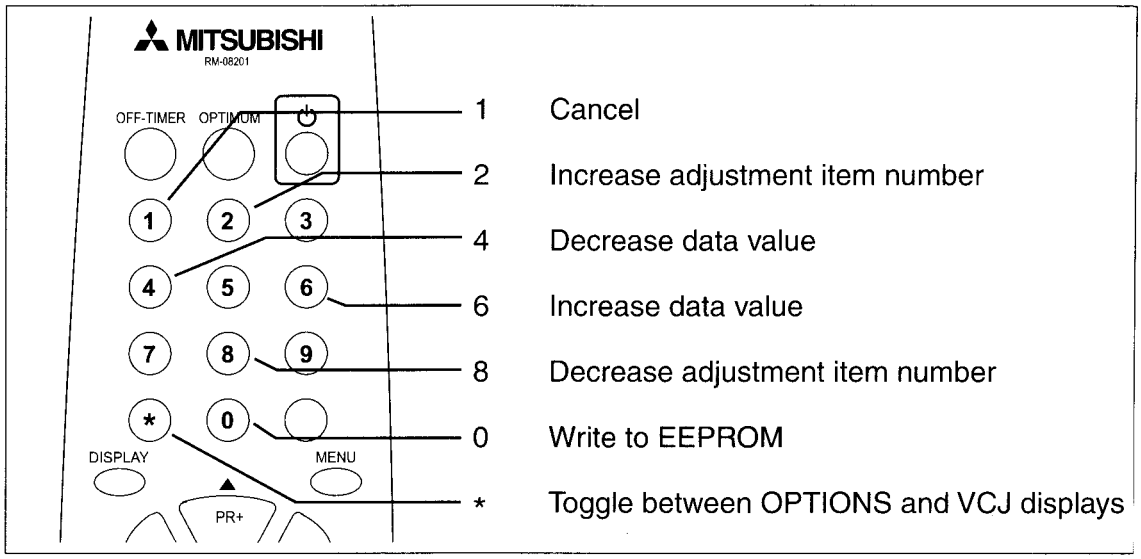


fig. 2.1A Remote Control Unit

2.1.1 Basic adjustment procedure

1. Turn the power on and enter service mode – press MENU to display the PICTURE menu then immediately key-in 2-3-5-7.
2. Press the * button to toggle between the OPTION and VCJ adjustment displays (figs. 2.1 B and 2.1C):

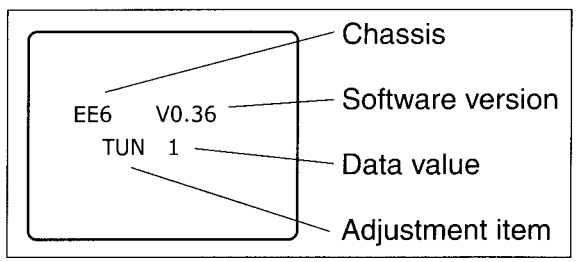


fig. 2.1B Options adjustment display

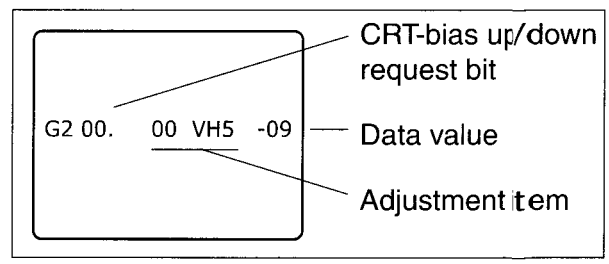


fig. 2.1C VCJ adjustment display

3. Press buttons 2 or 8 to increase or decrease the adjustment item number.
4. Press buttons 6 or 4 to increase or decrease the data value.
5. After completing your adjustments, press button "0" to write the data to the EEPROM.

   To cancel a change, press button "1" before writing the data to the EEPROM. *All* adjustments since the last EEPROM write will be lost.

2.1.2 Software diagnostics system

The microcontroller software contains basic diagnostic tools to help with fault-finding. Two microcontroller pins are used to indicate problems with the EEPROM (IC702) and the VCJ (IC201).

EEPROM – IC702

Should the eeprom fail to respond in some way to the system or if the data transfer to IC701 is continually incorrect then pin 25 of the microcontroller (IC701) will be pulsed continuously to indicate such a problem exists.

The system will continue to try and establish proper I²C communications with the eeprom for up to 30 seconds. The system will then carry out a hardware 'reset' and continue trying for a further 30 seconds. This cycle will repeat indefinately. This allows the system to operate in a limited way giving the service engineer time to trace the problem.

VCJ – IC201

Should I²C communication with the VCJ fail for some reason then pin 24 of IC701 will be pulsed continuously.

The system will try to establish I²C communication with the VCJ for up to 30 seconds. The system will carry-out a hardware 'reset' and continue again for a further 30 seconds. This cycle will repeat indefinately. This allows the system to operate in a limited way giving the service engineer time to trace the problem.

H-Timebase

Should the H-Timebase not start then the green power-on LED will flash.

This provides an indicator that the VCJ is functioning but some problem exists in the H-Drive output section of the chassis. The system will keep trying to start the H-Timebase for up to 30 seconds. The system will then carry-out a hardware 'reset' and continue again for a further 30 seconds. This cycle will be repeated a maximum of 10 times. After 10 attempts the system will stop.

2.2 EEPROM DATA

If you have replaced the EEPROM (IC702) or if for any reason the adjustment data has become corrupted it will be necessary to initialise the EEPROM.

2.2.1 Initialising the EEPROM

1. If necessary, switch off by the Main switch.
2. Connect pin 54 of IC701 or pin 1 of connector HE on PCB-SOUND or DOLBY to ground via a 100 ohm resistor.
3. Turn the mains switch on and wait 5 seconds.
4. Remove the resistor and the TV will then automatically power up after about 4 seconds. A blank picture will be displayed.
5. Press the MENU button until the MAIN menu appears and then immediately key-in 2-3-5-7.
6. If necessary, press the * button to select the OPTIONS adjustment display.
7. Press buttons 2 or 8 to select the adjustment code.
8. Adjust the data value for each code as shown in the table below using buttons 4 or 6.
   NOTE: start the adjustments at **DBY**.

Code	DBY	WID	ODT	TUN	AUD	STD	SYS	SPK	MNP	VOL	HYP	SCP	FMP
"B" models	0	0	08	0	0	1	2	1	70	X	X	1B	23
"L" models	0	0	08	1	0	1	2	1	70	X	X	1B	23

table 2.2A Data values for the OPTIONS adjustments.

9. Press the 0 button to write the changes to the EEPROM.
10. Press the * button to select the VCJ adjustment display.
11. Press buttons 2 or 8 to select the adjustment code.
12. Adjust the data value of each code using buttons 4 or 6 according to the table below:

Code	MTX	SHA	TNT	BGD	NTD	SCD	PCD	HPT	HPS	HPX	VBC
Value	-07	001	00	010	001	011	011	03	05	-07	-31

table 2.2B Data values for the VCJ adjustments.

2.2.2 OPTIONS and VCJ code descriptions

	VCJ			OPTIONS	
Picture format independant parameters	0	MTX	16x9 - SW.RGB-MATRIX	TUN	TUNER TYPE
	1	BDR	BLUE DRIVE	AUD	AUDIO SYSTEM
	2	GDR	GREEN DRIVE	STD	RECEPTION STANDARD
	3	RDR	RED DRIVE	SYS	COLOUR SYSTEM
	4	CON	CONTRAST	SPK	SPEAKER SW ENABLED
	5	BRI	BRIGHT	MNP	NICAM PRESCALE
	6	COL	COLOUR SATURATION	FFT	FAST TEXT / TOP TEXT
	7	SHA	SHARPNESS	VOL	VOLUME PRESCALE
	8	TNT	NTSC TINT	HYP	HYPERSOUND
	9	BGD	BG CHROMA DELAY OFFSET	SCP	SCART PRESCALE
	10	NTD	NTSC (358 & 443) CHROMA DELAY	FMP	FM PRESCALE
	11	SCD	SECAM-LUMA-DELAY	DBY	DOLBY
	12	PCD	PAL-LUMA-DELAY	WID	WIDE SCREEN
	13	HP5	H-PHASE-50 PAL	ODT	OSD DE-INTERLACE – TEXT MODE
	14	HP6	H-PHASE-60 NTSC		
	15	HPT	H-PHASE-TEXT		
	16	HPS	H-PHASE-SECAM		
	17	HPX	H-PHASE-RGB EXT		
	18	PA9	P-AMP-16:9		
Picture format dependant parameters	0	VH5	V-AMP-50		
	1	VBC	V-B-CORRECTION		
	2	PA5	P-AMP-50		
	3	PT5	P-TILT		
	4	LIN	V-LIN		
	5	CC5	C-CORRECTION-50		
	6	HW5	H-AMP		
	7	VS5	V-SHIFT-50		
	8	VH6	V-AMP-60		
	9	PA6	P-AMP-60		
	10	PT6	P-TILT-60		
	11	CC6	C-CORRECTION-60		
	12	HW6	H-AMP-60		
	13	VS6	V-SHIFT-60		
	14	TB5	TOP-BLANKING-50		
	15	BB5	BOTTOM-BLANKING-50		
	16	BW5	H-BLANKING-WIDTH-50		
	17	BP5	H-BLANKING-PHASE-50		
	18	TB6	TOP-BLANKING-60		
	19	BB6	BOTTOM-BLANKING-60		
	20	BW6	H-BLANKING-WIDTH-60		
	21	BP6	H-BLANKING-PHASE-60		

not applicable to these models

Table 2.2C OPTIONS and VCJ code descriptions

2.3 VIF CIRCUITS

2.3.1 RF-AGC

VR101 (near the tuner)

1. Supply an RF G-card signal (or use an off-air broadcast).
2. Check the AFT is **on** for the current channel.
3. Adjust **VR101** so that the picture and sound exhibit no noise, beat or intermodulation distortion.

2.4 POWER CIRCUIT

2.4.1 B+ VOLTAGE

VR951 (on main PCB next to the SMT)

1. Supply a G-Card signal.
2. Push the OPTIMUM button on the remote control.
3. Connect a DC voltmeter's "+" lead to TP91 on the MAIN PCB and the "–" lead to GROUND.
4. Adjust **VR951** so that the voltage is 145±2V.

2.5 DEFLECTION CIRCUITS

*Make the following adjustments 2.5.1 to 2.5.7 using 50Hz signals as described then repeat steps 2.5.3 to 2.5.7 using 60Hz signals. Replace all the adjustment codes mentioned with the 60Hz equivalent, for example, use HP**6** (for Horizontal Phase **60**) in place of HP**5** (for Horizontal Phase **50**).*

2.5.1 CRT BIAS

IMPORTANT NOTE
Before making any adjustments, if you have changed the CRT, FLYBACK TRANSFORMER or made any changes in the deflection circuits; adjust the CRT bias:

1. Supply a black raster signal to the RF or AV input.
2. Select 4:3 screen mode.
3. Connect an oscilloscope to the junction of R673 and W603.
4. Adjust the **SCREEN** control on the Flyback Transformer to give a voltage of 175V as shown in figure 2.5A.

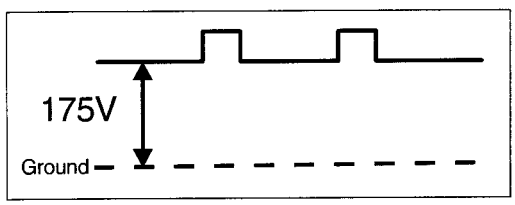


figure 2.5A

2.5.2 VERTICAL BREATHING CORRECTION

Code: 1 VBC (V-B-CORRECTION)

1. Select the VCJ adjustment display.
2. Set the adjustment code to **VBC** with buttons 2 or 8 on the remote control.
3. If necessary, adjust the data value to "-31" using buttons 4 or 6 on the remote control.

2.5.3 HORIZONTAL CENTRE

Code: HP5 (H-Phase-50)

1. Supply a G-Card or cross-hatch signal.
2. Select the VCJ adjustment display.
3. Set the adjustment code to **HP5** with buttons 2 or 8 on the remote control.
4. Adjust the horizontal position with buttons 4 or 6 on the remote control.

2.5.4 HORIZONTAL WIDTH

Code: HW5 (Horizontal Width)

1. Supply a G-Card or cross-hatch signal.
2. Set the VCJ adjustment code to **HW5**.
2. Adjust the horizontal width with the 4 or 6 buttons for approximately 7% overscan.

2.5.5 EAST-WEST PCC

Code: CC5 (Corner Correction)
Code: PT5 (Parabola Tilt)
Code: PA5 (Parabola Amp)

1. Supply a cross-hatch signal.
2. Set the VCJ adjustment codes to CC5, PT5 and PA5 in turn and adjust as follows:
3. Adjust the value of corner correction **CC5** to give the best picture.
4. Adjust the parabola tilt control **PT5** so that the upper and lower distortions of the left and right vertical lines are symmetrical (fig 2.5B).
5. Adjust the parabola amp control **PA5** so that the left and right vertical lines are straight (fig 2.5C).
6. Check the horizontal centre and horizontal width adjustments and readjust if necessary.

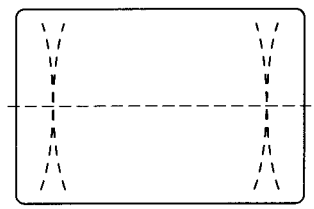


fig 2.5B

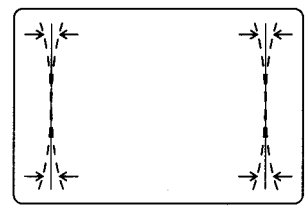


fig 2.5C

2.5.6 HEIGHT AND LINEARITY

Code: VH5 (V-Amp-50)
Code: LIN (V-Lin)

1. Supply a G-Card or (cross-hatch plus circle) signal.
2. Set the VCJ adjustment code to **VH5**.
3. Adjust the circle to a true circle with buttons 4 or 6 on the remote control.
4. Set the VCJ adjustment code to **LIN**.
5. Adjust the linearity to be the same for the top and bottom halves of the circle using buttons 4 or 6 on the remote control.
6. Repeat the steps above as required to give the best result for both adjustments.

NB The Linearity need not be adjusted again for the 60Hz deflection adjustments.

2.5.7 VERTICAL CENTRE

Code: VS5 (V-SHIFT-50)

1. Supply a G-Card or cross-hatch signal.
2. Set the VCJ adjustment code to **VS5**.
3. Adjust the centre line of picture to be within 3mm from the vertical centre on the screen using buttons 4 or 6 on the remote control.

*Now repeat steps 2.5.3 to 2.5.7 using 60Hz signals. Replace all the adjustment codes mentioned with the 60Hz equivalent, for example, use HP**6** (for Horizontal Phase **60**) in place of HP**5** (for Horizontal Phase **50**).*

2.6 CRT CIRCUITS

2.6.1 WHITE BALANCE

Code: BDR (B-Drive)
Code: GDR (G-Drive)
Code: RDR (R-Drive)

1. Supply a white raster signal.
2. Select the VCJ adjustment display.
3. Set the adjustment codes to **BDR, GDR** and **RDR** in turn and pre-adjust each to "+05".
4. Adjust codes **BDR** and **RDR** to give a good white balance.

2.6.2 FOCUS

FOCUS control on the Flyback Transformer

1. Supply an RF G-card signal (or use an off-air broadcast).
2. Adjust the **FOCUS** control for the best overall focus.

2.7 VIDEO CIRCUITS

Perform the following adjustments after adjusting the Deflection circuits. Allow the TV to warm up for 20 minutes before proceeding

2.7.1 BRIGHTNESS AND CONTRAST

CRT Bias (Screen) control on the Flyback Transformer
Code: BRI (Brightness)
Code: CON (Contrast)
BEAM CURRENT (using connector TP adjacent to the Flyback Transformer)

1. Connect a black raster signal.
2. Connect an oscilloscope to the junction of R673 and wire link W603.
3. Adjust the **SCREEN** control on the Flyback Transformer to give a voltage of 175V as shown in figure 2.7A.

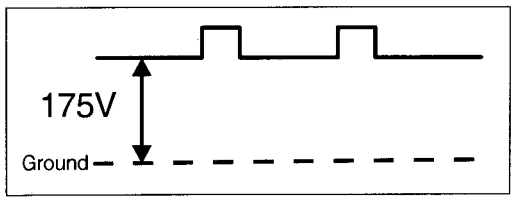


fig 2.7A

4. Change the external signal to a G-Card.
5. Set the VCJ adjustment code to **COL** with buttons 2 or 8 on the remote control.
6. Adjust the data value to "-31" with buttons 4 or 6 on the remote control.
7. Set the VCJ adjustment code to **BRI**.
8. Adjust using buttons 4 or 6 so that a slight difference in brightness can be seen between blue and black areas.
9. Connect a DC ammeter set to a 3mA range: "+" lead to connector TP pin 1 on the MAIN-PCB and the "–" lead to connector TP pin 3.
10. Set the VCJ adjustment code to **CON** with buttons 2 or 8 on the remote control.
11. Adjust the beam current using buttons 4 or 6 on the remote control to give a reading of 1200±20µA.
12. Check, and if necessary, readjust Brightness (code **BRI**).
13. Repeat steps 1 to 3 above to check bias voltage is still 175V and that the CRT Bias Up/Down Request bit is 00 (see fig 2.1C on page 7).

2.7.2 COLOUR OUTPUT

Make this adjustment only after adjusting the White Balance, Brightness and Contrast.

Code: COL (Colour Saturation)
Code: TNT (NTSC Tint)

1. Supply a PAL RF Colour-bar signal.
2. Set the VCJ adjustment code to **TNT** and check the value is "00"
3. Set the VCJ adjustment code to **COL**.
4. Connect an oscilloscope to the junction of R673 and IC660 Pin 9 (BLUE-OUT) on PCB-CRT.
5. Adjust the colour using buttons 4 or 6 until the waveform is as shown in figure 2.7B.
6. Increase the colour value by 5 steps.
7. Set the VCJ adjustment code to **TNT**.
8. Adjust the tint value to "04".

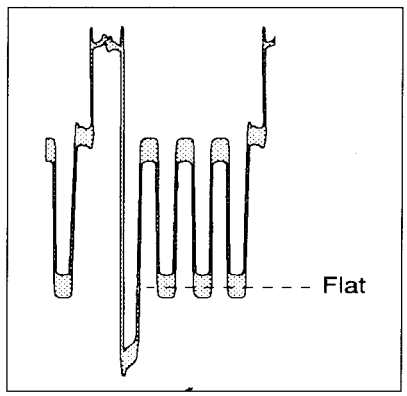


fig 2.7B

3 OPERATION GUIDE

MENU SYSTEM

Press the **MENU** button display either the **Picture, Sound, Special** or **Setup** menu. If necessary, press a colour button to select the desired menu.
Use ▲ or ▼ to select the control and ◿+ or ◿− to adjust the control.

PICTURE AND SOUND MENUS

With the **Picture** or **Sound** Menu on the screen, press the **OPTIMUM** button to return the *selected* control to the factory pre-set level.
During normal TV viewing, pressing the **OPTIMUM** button will return *all* the picture and sound settings except VOLUME, LOUDNESS and EFFECT (wide-sound) to the factory pre-set levels.
Press the **DISPLAY** button to exit.

SPECIAL MENU

Auto-Subtitle: set to ON this displays Teletext subtitles constantly.
Set to OFF to remove subtitles.
Set to Mute to display only when sound is muted.
Format: set to 4:3, AUTO or 16:9
Speakers: set to ON or OFF to switch on or off the internal speakers if an external sound system is being used.
Standard TV: set to ON to have the TV reset to Optimum its Picture and Sound settings automatically on switch-off.
Set to OFF to memorise these settings permanently.

SET-UP MENU

System: toggle the colour system between AUTO, PAL, 60PAL, Secam, NTSC358 or NTSC443. This temporarily overides the colour system set in the Install (tuning) Menu. Any change is lost when you change channel or select AV. The NTSC settings only apply to AV modes and Secam has no use on this model.
AV2 Output: select the output on AV2 to be either the TV signal or the input to AV1.
AV2 Dubbing: switch ON or OFF to enable the AV1 to AV2 dubbing function to operate in standby mode.

TUNING SYSTEM

AUTO-TUNING

The Auto-tuning system will tune in, store, name and correctly position all available stations within your reception area.
If you have a VCR connected to the TV (by the aerial socket) you should insert a *commercially recorded* videotape and set the VCR to PLAY.

1. Press the **INSTALL** button.
2. If desired, press the **RED** button to select either English or Gaeilge (Irish Gaelic) as an OSD language.
3. Press the **GREEN** button twice to start Auto-Tuning.

It will take a few minutes for the TV to find, name and store all the available stations. When Automatic Tuning is completed the TV will switch to programme position 1.
If the VCR was "found" during Automatic Tuning it will have been stored in position 6 or 7.

Moving and Deleting stations

1. Press the **INSTALL** button.
2. Press the **YELLOW** button. The Shuffle Menu appears.
3. Use the number buttons to select the station you want to move or delete.
4. To **move** a station:
   Press the **YELLOW** colour button to highlight this programme position in *red.*
   Use the number buttons to select the new programme position, the station moves automatically.
5. To **delete** a station:
   Press the **GREEN** button **twice.**
6. Repeat steps 3 to 7 for other stations.
7. Press the **INSTALL** button to exit to the INSTALL menu.

Programme Skip

This TV has a "skip" feature which allows you to preset a programme number so that it is not selected when changing channels using ▲ or ▼.

1. Press the **INSTALL** button.
2. Press the **YELLOW** button. The Shuffle Menu appears.
3. Use the number buttons to select the programme position you wish to "skip".
4. Press the **BLUE** button to toggle Skip ON or OFF.
5. Repeat steps 3 and 4 as required.
6. Press the **INSTALL** button to exit to the INSTALL menu.

Renaming Programmes

1. Press the **INSTALL** button.
2. Press the **YELLOW** button. The Shuffle Menu appears.
3. Use the number buttons to select the programme position you wish to rename
4. Press the **RED** button. A pointer appears under the first character in the name.
5. Use ◿+ or ◿− to change the character above the pointer. *A blank space = "-".*
6. Press the **RED** button to move the pointer to the next character.

7. Repeat steps 5 and 6 to complete the name.
8. Repeat steps 3 to 7 for other programmes.
9. Press the **INSTALL** button to exit to the INSTALL menu.

MANUAL AND FINE TUNING

1. Press the **INSTALL** button.
2. Press the **BLUE** button for Manual Tuning.
3. Use the number buttons to select a station.
4. If necessary, use ▲ or ▼ to highlight the band control and select UHF, VB1 or VB2 (Irish models only).
5. Use ▲ or ▼ to select the tuning bar.
6. Start manual tuning by pressing ◿+ or ◿-. The tuning bar turns **RED** while searching then **YELLOW** after a station is found. Press ◿+ or ◿- again if this is not the right station.
   If the tuning bar does not turn red, press ▲ or ▼ to highlight AFT and switch it ON by pressing ◿+. Then go back to step 4.
7. **To Fine Tune:** press ▲ or ▼ to select AFT and switch it OFF by pressing ◿+ or ◿-.
8. Press ▼ to select the tuning bar and adjust the fine tuning by **holding** ◿+ or ◿-.
9. When you have finished, press the **STORE** button to memorise the new settings.
9. Press the **INSTALL** button to exit to the INSTALL menu.

AV SYSTEM

This TV has two Scart sockets, AV1 is full spec. with RGB input, AV2 has Y-C inputs instead of RGB.
The TV also has 2 RCA sockets for controlled audio output.

Selecting AV mode from TV mode
TV-AV button: cycles around AV1, AV2 and TV modes.
The AV input is either composite or RGB/Y-C depending on what was previously selected.
RED button: selects AV1 then toggles between composite and RGB input.
GREEN button: selects AV2 then toggles between composite and Y-C input.
Returning to TV mode
Pressing the **TV-AV** button **or** any number button **or** the ▲ or ▼ buttons will return the set to TV mode *even when Scart pin 8 is high.*
See "Set-Up Menu" for setting the output of AV2 and switching on standby dubbing.

NICAM STEREO

The **I/II** button operates all functions: press to display the current Nicam mode, press again while the OSD is on-screen to force Nicam Off, press to select language during a dual-sound broadcast.

OFF TIMER

SETTING THE TIMER

1. Press the **OFF-TIMER** button, the screen shows ◰ 00.
2. Press the button again to start the clock at 90 then make it count down in ten minute steps until you see the time you want.
3. When the display diappears, the timer is set.

TO CANCEL THE TIMER
Press the **OFF-TIMER** button until the display shows zero, or press Standby.

TO CHECK THE REMAINING TIME
Press the **OFF-TIMER** button *once.*
For the last 10 minutes the display will appear in ***red*** every minute then continuously for the last minute.

4 PARTS LIST

4.1 NOTES

4.1.1 Model-specific parts

As this service manual covers more than one model, the Service Parts List indicates where certain parts are model-specific. If there is no such indication then the parts are common to all models covered by this manual.

25" = C25S7B, C25C7B, C25S7L; **28"** = C28S7B, C28C7B, C28S7L

B = C25S7B & C28S7B; **L** = C25S7L, C28S7L; **C** = C25C7B, C28C7B

Other indications are combinations of the above.

4.1.2 Ordering

In order to expedite delivery of replacement parts, please specify:

Model number, Serial number

Part Number, Description, Quantity

Unless full information is provided a delay in execution of the order may result.

4.1.3 Safety

Safety Critical components are shown thus: ⚠ and must be replaced with original Mitsubishi parts.

4.1.4 Component tolerances

Component value tolerances are coded as shown the table below:

B	C	D	F	G	J	K	M	N	V	X	Z	P	Q
±0.1	±0.25	±0.5	±1	±2	±5	±10	±20	±30	+10 -10	+40 -20	+80 -20	+100 -0	+30 -10

4.2 SERVICE PARTS LIST

SYMBOL	PART No	PART NAME	DESCRIPTION	MODELS
CRT				
⚠	255P828010	CRT	A59ECF50X12	25"
⚠	H25P006010	CRT	A66EHJ43X01	28"
ICs (and retaining clips)				
IC101	270P341020	IC	TDA4472-C	
IC201	270P254040	IC	MC44031 E36E-4	
IC202	270P263010	IC	TEA6415C	
IC301	275P130010	IC	MSP3410D-B3	
IC351	270P259010	IC	TDA7263	
IC351	596D850010	HOLDER-IC		
IC3B1	270P259010	IC	TDA7263	28"
IC3B1	597D329010	HOLDER-IC		28"
IC401	270P261010	IC	TDA8171	
IC401	596D850010	HOLDER-IC		
IC551	272P406010	IC	TEA2031A	
IC660	270P207010	IC-CRT-OUTPUT	TEA5101B	
IC660	596D884010	HOLDER-IC		
IC701	274P755050	IC	9291N7B1***/A50	
IC702	274P747010	IC-C-MOS	ST24C16CB1	
IC7701	275P115010	IC	SAA5261PS/107	
IC7702	274P171010	IC	ST24C02AB1	
IC901	272P514010	IC	TEA 2261	
IC951	270P260010	IC	TDA8137	
IC951	596D837010	HOLDER-IC		
TRANSISTORS (and retaining clips)				
Q102	260P749050	TRANSISTOR	JA101-Q,R	
Q105	260P748030	TRANSISTOR	JC501-R	
Q106	260C603010	TRANSISTOR	DTA124ES/UN4112	L
Q107	260C603010	TRANSISTOR	DTA124ES/UN4112	L
Q108	260C603010	TRANSISTOR	DTA124ES/UN4112	L
Q251	260P748030	TRANSISTOR	JC501-R	
Q252	260P748030	TRANSISTOR	JC501-R	
Q253	260P748030	TRANSISTOR	JC501-R	
Q256	260P748030	TRANSISTOR	JC501-R	
Q301	260C604020	TRANSISTOR	DTC124ES	
Q302	260P748030	TRANSISTOR	JC501-R	
Q303	260P748030	TRANSISTOR	JC501-R	
Q304	260P748030	TRANSISTOR	JC501-R	28"
Q305	260P748030	TRANSISTOR	JC501-R	
Q306	260P748030	TRANSISTOR	JC501-R	28"
Q307	260P749030	TRANSISTOR	JA101-Q	
Q308	260P749030	TRANSISTOR	JA101-Q	
Q320	260C604020	TRANSISTOR	DTC124ES	
Q321	260P748030	TRANSISTOR	JC501-R	
Q322	260P749050	TRANSISTOR	JA101-Q,R	
Q3A07	260C604020	TRANSISTOR	DTC124ES	28"
Q450	260P748030	TRANSISTOR	JC501-R	
Q451	260P387010	TRANSISTOR	2SC2236-O,Y	
Q501	260P748030	TRANSISTOR	JC501-R	
Q551	260P422010	TRANSISTOR	2SC2482	
Q552	261P007010	TRANSISTOR	S2055N	
Q552	596D884010	HOLDER-IC		

SYMBOL	PART No	PART NAME	DESCRIPTION	MODELS
Q601	260P748020	TRANSISTOR	JC501-Q,R	
Q6E2	260P748030	TRANSISTOR	JC501-R	28"
Q6E3	260P748030	TRANSISTOR	JC501-R	28"
Q6E4	260P748030	TRANSISTOR	JC501-R	28"
Q6E5	260P748030	TRANSISTOR	JC501-R	28"
Q6E7	260P748030	TRANSISTOR	JC501-R	
Q6E8	260C255040	TRANSISTOR	2SA950-Y (FORMED)	
Q701	260C559050	TRANSISTOR	2SC1740S-E (FORMED)	
Q702	260P748030	TRANSISTOR	JC501-R	
Q703	260P749030	TRANSISTOR	JA101-Q	
Q704	260P748030	TRANSISTOR	JC501-R	
Q705	260P749030	TRANSISTOR	JA101-Q	
Q706	260P749030	TRANSISTOR	JA101-Q	
Q707	260P748030	TRANSISTOR	JC501-R	
Q708	260P748030	TRANSISTOR	JC501-R	
Q710	260P748030	TRANSISTOR	JC501-R	
Q711	260P748030	TRANSISTOR	JC501-R	
Q712	260P748030	TRANSISTOR	JC501-R	
Q713	260P748020	TRANSISTOR	JC501-Q,R	
Q714	260P748030	TRANSISTOR	JC501-R	
Q715	260P748030	TRANSISTOR	JC501-R	
Q716	260P748030	TRANSISTOR	JC501-R	
Q717	260P748030	TRANSISTOR	JC501-R	
Q718	260P748020	TRANSISTOR	JC501-Q,R	
Q7701	260P749030	TRANSISTOR	JA101-Q	
Q7702	260P748030	TRANSISTOR	JC501-R	
Q7706	260P748030	TRANSISTOR	JC501-R	
Q901	261P006010	TRANSISTOR	S2000N	
Q901	596D884010	HOLDER-IC		
Q902	260P748030	TRANSISTOR	JC501-R	
Q951	260P748030	TRANSISTOR	JC501-R	
Q952	260P630010	TRANSISTOR	2SD2012	
Q952	596D837010	HOLDER-IC		
DIODES				
D102	264P370010	DIODE	1N4148	
D201	264P370010	DIODE	1N4148	
D251	264P460020	DIODE	EQA02-05CD/RD5.1EB1	
D252	264P460020	DIODE	EQA02-05CD/RD5.1EB1	
D253	264P460020	DIODE	EQA02-05CD/RD5.1EB1	
D254	264P460020	DIODE	EQA02-05CD/RD5.1EB1	
D255	264P460020	DIODE	EQA02-05CD/RD5.1EB1	
D256	264P460020	DIODE	EQA02-05CD/RD5.1EB1	
D257	264P460020	DIODE	EQA02-05CD/RD5.1EB1	
D258	264P460020	DIODE	EQA02-05CD/RD5.1EB1	
D301	264P370010	DIODE	1N4148	
D302	264P370010	DIODE	1N4148	
D303	264P370010	DIODE	1N4148	
D304	264P370010	DIODE	1N4148	
D305	264P370010	DIODE	1N4148	
D306	264P370010	DIODE	1N4148	
D307	264P370010	DIODE	1N4148	
D401	264P374020	DIODE	1N4003ID	

SYMBOL	PART No	PART NAME	DESCRIPTION	MODELS
D402	264P370010	DIODE	1N4148	
D501	264P463020	DIODE	EQA02-08C/RD8.2EB2	
D502	264P370010	DIODE	1N4148	
D503	264P370010	DIODE	1N4148	
D504	264P371010	DIODE	BYD33G/A52R	
D505	264P375020	DIODE	BY228 (FORMED)	
D506	264P378020	DIODE	BYW96E (FORMED)	
D507	264P371010	DIODE	BYD33G/A52R	
D508	264P371010	DIODE	BYD33G/A52R	
D509	264P371010	DIODE	BYD33G/A52R	
D525	264P371010	DIODE	BYD33G/A52R	
D560	264P370010	DIODE	1N4148	
D561	264P493020	DIODE	RD39FB2	
D562	264P370010	DIODE	1N4148	
D563	264P370010	DIODE	1N4148	
D601	264P370010	DIODE	1N4148	
D655	264P370010	DIODE	1N4148	
D656	264P370010	DIODE	1N4148	
D657	264P370010	DIODE	1N4148	
D658	264P458030	DIODE	RD3.6EB2	
D6A7	264P372010	DIODE	BYV96E	
D6B2	264P371010	DIODE	BYD33G/A52R	
D701	264P460020	DIODE	EQA02-05CD/RD5.1EB1	
D702	264P460020	DIODE	EQA02-05CD/RD5.1EB1	
D703	264P461070	DIODE	EQA02-06D/RD6.2EB2	
D704	264P370010	DIODE	1N4148	
D705	264P370010	DIODE	1N4148	
D706	264P465040	DIODE	EQA02-12AB/RD13EB1,B2	
D707	264P370010	DIODE	1N4148	L
D708	264P370010	DIODE	1N4148	L
D7701	264P370010	DIODE	1N4148	
D7C91	264P584020	DIODE	SML1216W-C,D	
D901	264P376010	DIODE	BYW56	
D902	264P376010	DIODE	BYW56	
D903	264P376010	DIODE	BYW56	
D904	264P376010	DIODE	BYW56	
D905	264P371010	DIODE	BYD33G/A52R	
D906	264P372010	DIODE	BYV96E	
D907	264P481060	DIODE	RD3.0FB2	
D908	264P370010	DIODE	1N4148	
D909	264P481060	DIODE	RD3.0FB2	
D951	264P378020	DIODE	BYW96E (FORMED)	
D952	264P378020	DIODE	BYW96E (FORMED)	
D953	264P377020	DIODE	BYW95B (FORMED)	
D954	264P377020	DIODE	BYW95B (FORMED)	28"
D955	264P461080	DIODE	EQA02-06E/RD6.2EB3	
D956	266P010020	IC-DIODE	μPC574J-K	
D957	264P463090	DIODE	EQA02-09D/RD10E	
D959	264P377020	DIODE	BYW95B (FORMED)	

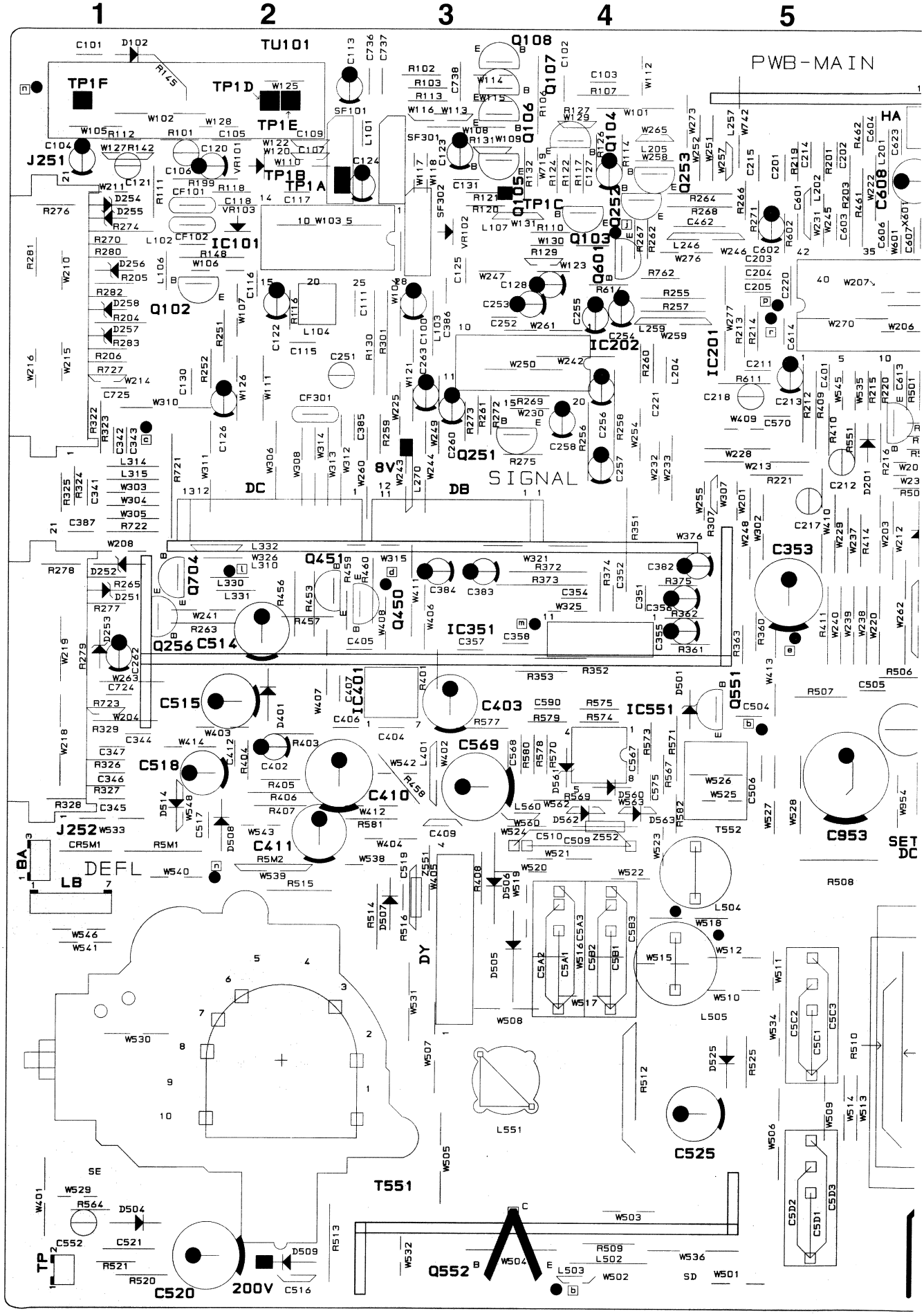
SYMBOL	PART No	PART NAME	DESCRIPTION	MODELS
COILS AND TRANSFORMERS				
L101	325C164070	COIL-PEAKING	0.47µH-J	
L102	325C161010	COIL-PEAKING	6.8µH-K	
L103	325C121030	COIL-PEAKING	10µH-K	
L104	323P175070	COIL-VIF	VIF=39.2MHz, Cin=9PF	
L106	325C121030	COIL-PEAKING	10µH-K	
L201	321C031090	COIL-RF	33µH-K	
L205	325C120010	COIL-PEAKING	1µH-M	
L301	325C120010	COIL-PEAKING	1µH-M	
L302	325C120010	COIL-PEAKING	1µH-M	
L303	325C120010	COIL-PEAKING	1µH-M	
L304	325C120070	COIL-PEAKING	3.3µH-K	
L305	325C120070	COIL-PEAKING	3.3µH-K	
L308	325C120070	COIL-PEAKING	3.3µH-K	
L309	325C120070	COIL-PEAKING	3.3µH-K	
L310	325C120070	COIL-PEAKING	3.3µH-K	
L314	325C120070	COIL-PEAKING	3.3µH-K	
L315	325C120070	COIL-PEAKING	3.3µH-K	
L330	325C120070	COIL-PEAKING	3.3µH-K	
L331	325C120070	COIL-PEAKING	3.3µH-K	
L332	325C120070	COIL-PEAKING	3.3µH-K	
L3C06	325C120070	COIL-PEAKING	3.3µH-K	
L3C07	325C120070	COIL-PEAKING	3.3µH-K	
L401	411P001070	LEAD-FERRITE		
L502	321C030010	COIL-RF	1µH-K	
L503	411D009020	CORE-FERRITE		
L504	409P749010	COIL-PCC-CHOKE	15µH	
L505	409P748010	COIL-PCC	1µH	
L551	333P032020	COIL-HORIZ-LIN		
L560	325C402000	COIL-PEAKING	39µH	
L701	325C121070	COIL-PEAKING	22µH-K	
L702	325C121070	COIL-PEAKING	22µH-K	
L703	325C121030	COIL-PEAKING	10µH-K	
L7701	410P003010	FERRITE-LEAD		
L7702	410P003010	FERRITE-LEAD		
L7707	325C162050	COIL-PEAKING	100µH-K	
L901	321C030050	COIL-RF	2.2µH-K	
L903	411P001070	LEAD-FERRITE		
L905	411P001070	LEAD-FERRITE		
L951	325D059060	COIL-PEAKING	390µH-K	
L991	351P047020	LINE-FILTER	Z85555TA	
L995	351P038030	LINE FILTER	18D290BF	
⚠ T551	334P243040	TRANS-FLYBACK		
T552	336P017010	TRANS-HORIZ-DRIVE	SRW16/14PS04	
⚠ T901	350P646040	TRANS-POWER		25"
⚠ T901	350P646050	TRANS-POWER		28"
⚠	409P564040	COIL-DEGAUSSING		25"
⚠	409P564050	COIL-DEGAUSSING		28"

SYMBOL	PART No	PART NAME	DESCRIPTION	MODELS
RESISTORS – fixed and variable				
R114	103P465010	R-METAL	1/4W 12K-F	
R131	103P465090	R-METAL	1/4W 27K-F	
R212	103P906060	R-METAL	0.4W 51K-F	
⚠ R352	103P378060	R-FUSE	1/4W 3.3-J	
⚠ R353	103P378060	R-FUSE	1/4W 3.3-J	
⚠ R3B01	103P378060	R-FUSE	1/4W 3.3-J	28"
⚠ R3B02	103P378060	R-FUSE	1/4W 3.3-J	28"
R405	109P129010	R-METAL	1/6W 8.2K-G 450	
R508	102P243020	R-CEMENT-METAL-SUS	5W 3.9K-K/J	
R511	102P228050	R-CEMENT-WIRE-SUS	10W 2.7	
⚠ R512	103P432050	R-FUSE-METAL	2W 1K	
⚠ R513	103P397090	R-FUSE	1/2W 0.82-J	
⚠ R514	103P397090	R-FUSE	1/2W 0.82-J	
R573	103P906010	R-METAL	0.4W 33K-F	
R574	103P905070	R-METAL	0.4W 22K-F	
R575	103P905050	R-METAL	0.4W 18K-F	
R5M1	109P912080	R-COMPOSITION	1/2W 2.2M-K	
R5M3	109P912080	R-COMPOSITION	1/2W 2.2M-K	
⚠ R671	103P447080	R-FUSE-METAL	1W 0.68-K, J	28"
⚠ R671	103P448040	R-FUSE-METAL	1W 2.2-K, J	25"
⚠ R692	103P391030	R-FUSE	1/2W 100-J	
⚠ R694	103P390010	R-FUSE	1/2W 10-J	
R765	103P905030	R-METAL	0.4W 15K-F	L
R921	109D074010	R-CEMENT-METAL	5W 1.8K-K, J	
R954	103P907080	R-METAL	0.4W 160K-F	
R955	103P904070	R-METAL	0.4W 8.2K-F	
⚠ R981	109P913050	R-COMPOSITION	1/2W 6.8M-J	
⚠ R982	109P913050	R-COMPOSITION	1/2W 6.8M-J	
R991	102P087040	R-CEMENT-WIRE	10W 4.7-K	
⚠ R992	109P911090	R-COMPOSITION	1/2W 470K-J	
VR101	127C380080	VR-SEMIFIXED	1/5W B10K-M	
VR102	127C380080	VR-SEMIFIXED	1/5W B10K-M	
VR951	127C380090	VR-SEMIFIXED	1/5W B20K-M	
CAPACITORS				
C510	MELP420010	C-M-PLASTIC-PP	KP/MKP375 1600V 0.018μF-J	
C5A3	172P952040	C-M-PLASTIC-PP	2000V (1700VP-P) 9100pF	
C5B3	172P951030	C-M-PLASTIC-PP	2000V (1700VP-P) 3300pF	
C904	185D059040	C-ELECTROLYTIC	385V/400V 150μF	
⚠ C981	189P091010	C-CERAMIC-AC	AC400V E4700pF-M	
⚠ C991	189P180030	C-M-POLYPROPYLENE-AC	0.22μF-M 275V(AC) X2	
CONNECTORS AND SWITCHES				
J251	452C080020	21 PIN-SCART	035-098-4505	
J252	452C080020	21 PIN-SCART	035-098-4505	
J352	451C177010	PIN-JACK-2P	YKC21-5508	
J3C51	451C082040	JACK-MICROPHONE		
⚠ J601	449C126010	CRT SOCKET	033 055044	
S7C02	432P089020	SW-KEY-BOARD		
S7C03	432P089020	SW-KEY-BOARD		
S7C04	432P089020	SW-KEY-BOARD		
S7C05	432P089020	SW-KEY-BOARD		
⚠ S991	432C081010	MAINS SWITCH	151-ESB-92D21B (R00)	

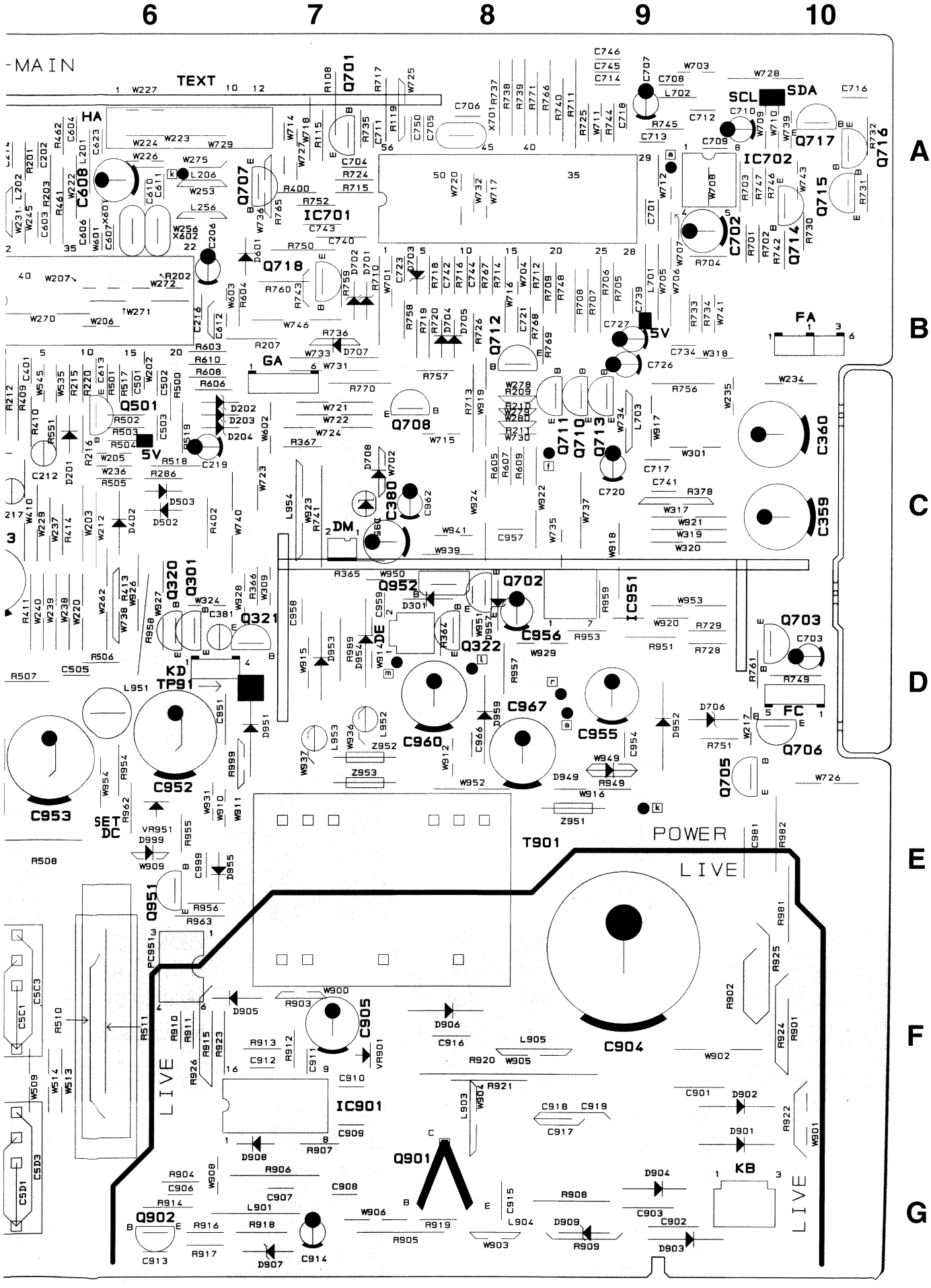
SYMBOL	PART No	PART NAME	DESCRIPTION	MODELS
MISCELLANEOUS				
	CF101	296P024040	CERAMIC-TRAP	TPS6.0MB	
	CR5M1	149P008010	CR-MULTIPLE	470pF 3.6M-K	
⚠	F991	283D047040	FUSE	T2A	
⚠	PC951	268P068010	PHOTO COUPLER	TCDT1124G	
⚠	RP991	265P071050	POSISTOR	PTH451C41BG180N	
	SF101	296P144010	SAW-FILTER	OFWJ3950M	B, C
	SF101	296P144020	SAW-FILTER	OFWK3953M	L
	SF301	296P145010	SAW-FILTER	OFWK9350M	
	SP391	480P660060	SPEAKER	Right	
	SP392	480P660060	SPEAKER	Left	
	SP393	480P383040	SPEAKER	Woofer	28"
	TU101	295P430010	TUNER-TV	U1343/IEC	B, C
	TU101	295P430020	TUNER-TV	UV1315/IEC	L
	X301	MELP433010	QUARTZ-CRYSTAL	18.432MHz	
	X601	285P142020	QUARTZ-CRYSTAL	17.734475MHz	
	X602	285P143020	QUARTZ-CRYSTAL	14.31818MHz	
	X701	285P139040	QUARTZ-CRYSTAL	12MHz	
	X7701	285P139040	QUARTZ-CRYSTAL	12MHz	
⚠	Z551	299P201080	PROTECTOR	5000	
⚠	Z552	299P193010	PROTECTOR	2000	
	Z7C01	939P580020	IR-PHOTO-MODULE	TFMK 5330	
⚠	Z951	299P193040	PROTECTOR	3150	
⚠	Z952	299P193070	PROTECTOR	5000	
⚠	Z953	299P193090	PROTECTOR	1600	
PCB ASSEMBLIES				
⚠	920A433001	ASSY-PWB-MAIN		28B, 28C
⚠	920A433002	ASSY-PWB-MAIN		28L
⚠	920A434001	ASSY-PWB-MAIN		25B, 25C
⚠	920A434002	ASSY-PWB-MAIN		25L
⚠	921C206001	ASSY-PCB-PWB-CRT		25"
⚠	921C206002	ASSY-PCB-PWB-CRT		28"
⚠	921C212001	ASSY-PCB-PWB-CPS		25"
⚠	921C212005	ASSY-PCB-PWB-CPS		28"
⚠	921C213001	ASSY-PCB-PWB-TEXT		25"
⚠	921C213004	ASSY-PCB-PWB-TEXT		28"
⚠	921C216001	ASSY-PWB-SOUND		25"
⚠	921C216005	ASSY-PWB-SOUND		28"
⚠	921C272002	ASSY-PWB-AUDIO-PWR		28"
MECHANICAL AND COSMETIC				
⚠	246C162010	AC-POWER CORD/UK-PLUG		
	290P082010	REMOTE-CONTROL		
	641B742010	FRAME-AUDIO-POWER		28"
	669D218070	SCREW-M5x35 SEMS	CRT FIXING	
	669D220030	SCREW-TB 3x10		
	669D221040	SCREW-TB 4x12		
	669D221060	SCREW-TB 4x16	BACK COVER FIXING	
⚠	700C612020	ASSY BACK-COVER		25B
⚠	700C612030	ASSY BACK-COVER		28B
⚠	700C613010	ASSY BACK-COVER		25L

SYMBOL	PART No	PART NAME	DESCRIPTION	MODELS
⚠	700C613020	ASSY BACK-COVER		28L
⚠	700C613070	ASSY BACK-COVER		25C
⚠	700C613080	ASSY BACK-COVER		28C
	701D610070	ASSY-CABINET-FRONT		25B, 25L
	701D610080	ASSY CABINET-FRONT		28B, 28L
	701D611030	ASSY-CABINET-FRONT		25C
	701D611040	ASSY-CABINET-FRONT		28C
	752B027020	PANEL-FRONT-LEFT		25C
	752B027030	PANEL-FRONT-RIGHT		25C
	752B029020	PANEL-FRONT-LEFT		28C
	752B029030	PANEL-FRONT-RIGHT		28C
	754C062010	KNOB-POWER		
	754C063010	KNOB-PUSH		
	770B221020	UNIT-TV-STAND		except C
	770B222010	UNIT-CABINET-STAND		25C
	770B222020	UNIT-CABINET-STAND		28C
	801C340030	PACKING CASE		25"
	801C340040	PACKING CASE		28"
	803A464010	CUSHION SET		28"
	803A465010	CUSHION SET		25"
	831D296030	PACKING-BAG		25"
	831D296040	PACKING-BAG		28"
	871C603030	SERVICE MANUAL		
	872C127050	IB-COLOUR		B, C
	872C127060	IB-COLOUR		L
	H92D001033	LEG (1 PIECE)	Trolley stand	except C
	H92D001034	SHELF	Trolley stand	except C
	H92D001035	CASTORS (SET OF 4)	Trolley stand	except C
	H92D001036	SCREW KIT	Trolley stand	except C
	H92D001037	BACK PANEL	Trolley stand	except C
	H92D001044	BASE SHELF	Cabinet stand	25C
	H92D001045	BASE SHELF	Cabinet stand	28C
	H92D001046	TOP	Cabinet stand	25C
	H92D001047	TOP	Cabinet stand	28C
	H92D001048	SIDE TRIMS (PAIR)	Cabinet stand	25C
	H92D001049	SIDE TRIMS (PAIR)	Cabinet stand	28C
	H92D001050	BACK PANELS (PAIR)	Cabinet stand	25C, 28C
	H92D001051	GLASS DOOR	Cabinet stand	25C, 28C
	H92D001052	MIDDLE SHELF	Cabinet stand	25C, 28C
	H92D001053	SIDE PANEL	Cabinet stand	25C, 28C
	H92D001054	CASTOR KIT (Incl. hinges)	Cabinet stand	25C, 28C
	H92D001055	FIXING KIT (All screws, etc.)	Cabinet stand	25C, 28C

5 PCB DIAGRAMS – MAIN-PCB 1/2



MAIN-PCB 2/2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MAIN PCB LOCATIONS

C509	E4
C510	E4
C5A3	F4
C5B3	F4
C904	F9
C981	E10
CF101	A2
CF102	B2
CF301	C2
CR5M1	E1
D102	A1
D201	C6
D202	C6
D203	C6
D204	C6
D251	D1
D252	C1
D253	D1
D254	A1
D255	B1
D256	B1
D257	B1
D258	B1
D301	D8
D401	D2
D402	C6
D501	D4
D502	C6
D503	C6
D504	G1
D505	F3
D506	E3
D507	E3
D508	E2
D509	G2
D514	E1
D525	F5
D560	E4
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D563	E4
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D956	C7
D957	D8
D959	D8
D999	E6
IC101	B2
IC201	B5
IC202	B4
IC351	D3
IC401	D3
IC551	D4
IC701	B7
IC702	A10
IC901	F7
IC951	D9
J251	A1
J252	E1
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L102	B1
L103	B3

L104	B2
L106	B1
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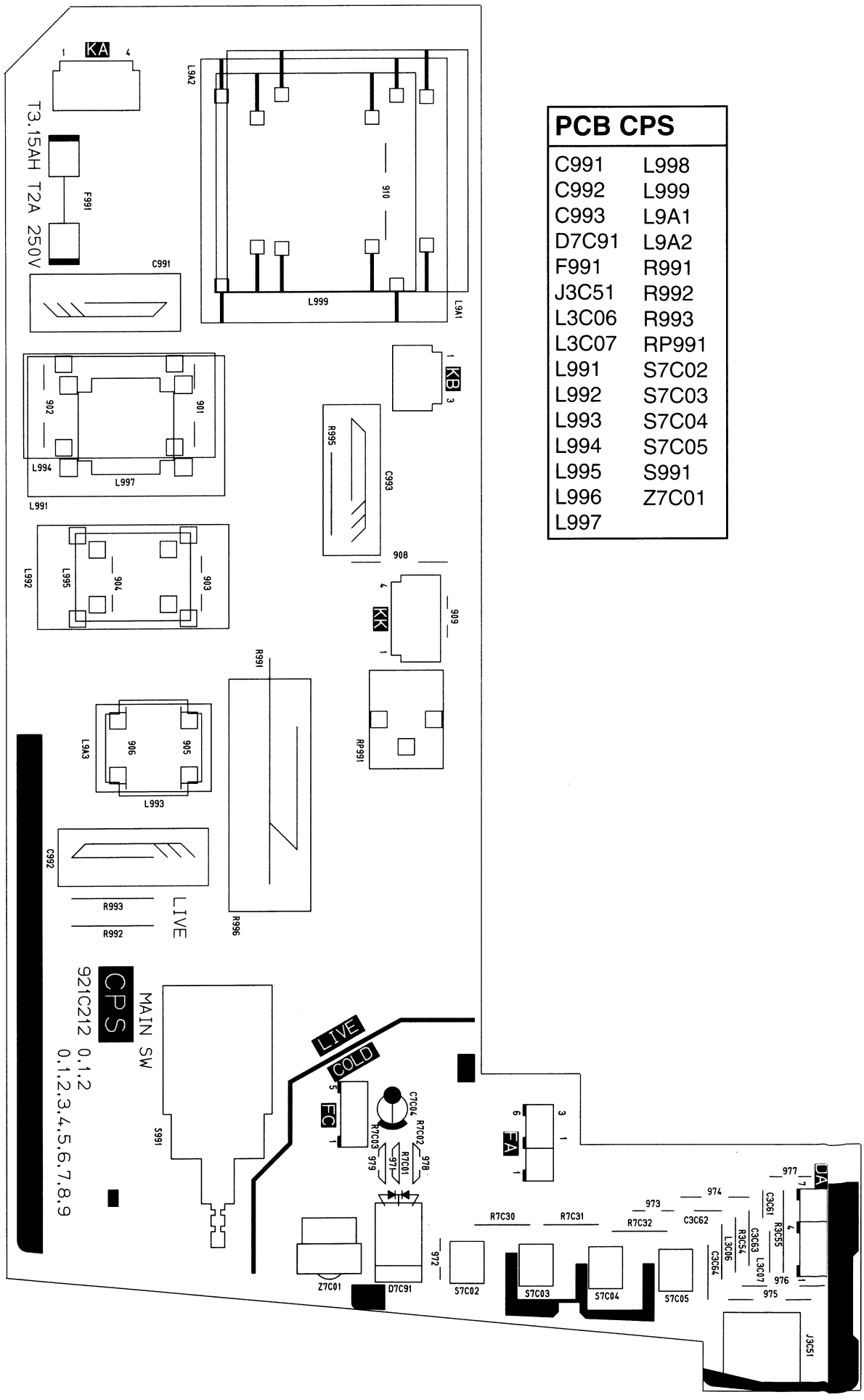
L205	A4
L206	A6
L246	B4
L256	B6
L257	A5
L259	B4
L270	C3
L310	C2
L314	C1
L315	C1
L330	D2
L331	D2
L332	C2
L401	D3
L502	G4
L503	G4
L504	E5
L505	F5
L551	F3
L560	E4
L701	B9
L702	A9
L703	C9
L901	G7
L903	G8
L904	G8
L905	F8
L951	D6
L952	D7
L953	D7
L954	C7
PC951	F6
Q102	B2
Q103	B4
Q104	A4
Q105	A3

Q106	A3
Q107	A3
Q108	A3
Q251	C3
Q252	A4
Q253	A4
Q256	D1
Q301	D6
Q320	D6
Q321	D7
Q322	D8
Q450	D3
Q451	D2
Q501	C6
Q551	D5
Q552	G3
Q601	B4
Q701	A7
Q702	D8
Q703	D10
Q704	C2
Q705	E10
Q706	D10
Q707	A7
Q708	C8
Q710	C9
Q711	C8
Q712	B8
Q713	C9
Q714	A10
Q715	A10
Q716	A10
Q717	A10
Q718	B7
Q901	G8
Q902	G6
Q951	E6
Q952	D8
R114	A4
R131	A3
R212	C5
R352	D4

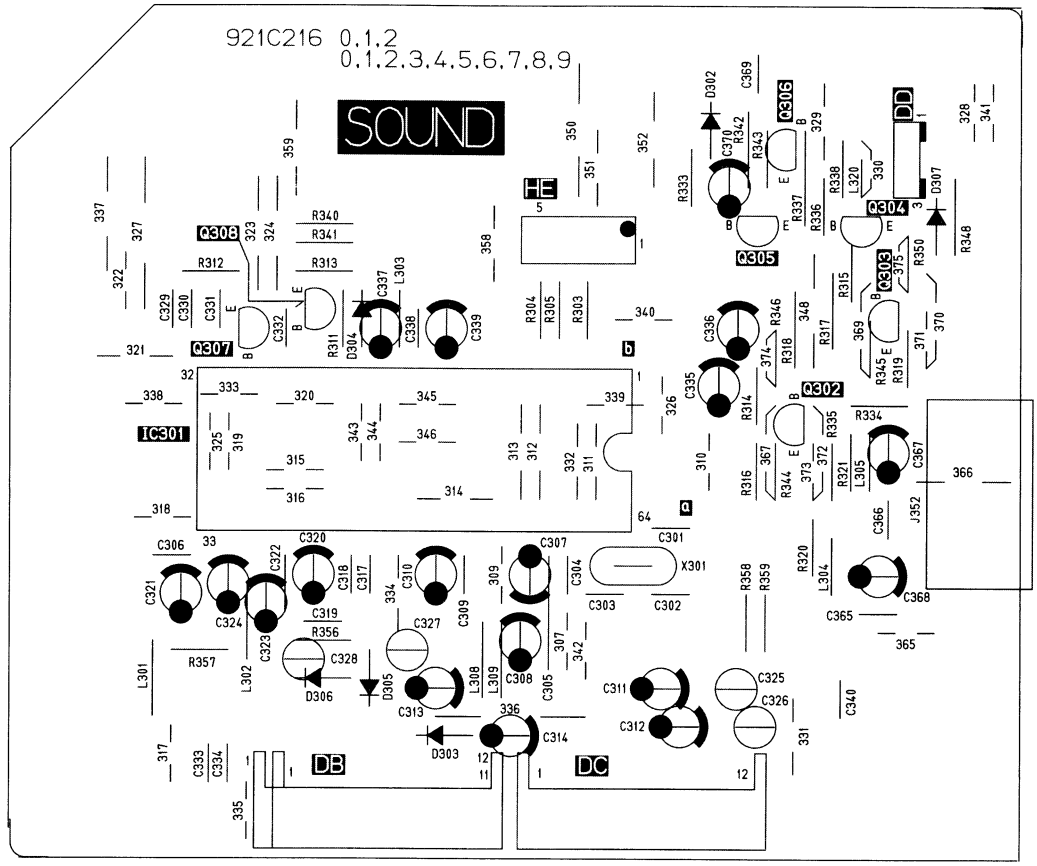
R353	D4
R401	D3
R405	E2
R508	E5
R511	F6
R512	F4
R513	G2
R514	E3
R573	D4
R574	D4
R575	D4
R5M1	E1
R5M2	E2
R765	A7
R921	F8
R954	E6
R955	E6
R981	E10
R982	E10
SF101	A2
SF301	A3
SF302	A3
T551	G3
T552	E5
T901	E8
TU101	A2
VR101	A2
VR102	B3
VR103	B2
VR901	F7
VR951	E6
X601	A6
X602	B6
X701	A8
Z551	E3
Z552	E4
Z951	E9
Z952	E7
Z953	E7



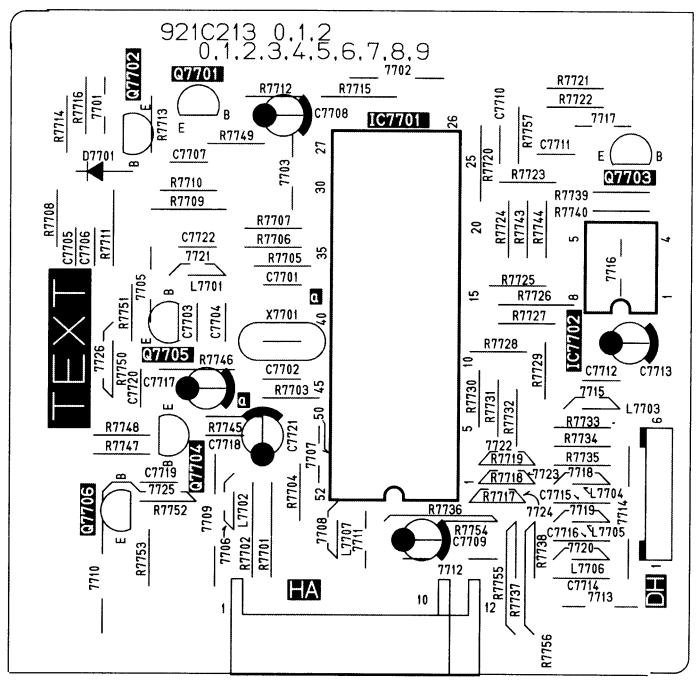
PCB CPS

C991	L998
C992	L999
C993	L9A1
D7C91	L9A2
F991	R991
J3C51	R992
L3C06	R993
L3C07	RP991
L991	S7C02
L992	S7C03
L993	S7C04
L994	S7C05
L995	S991
L996	Z7C01
L997	

PCB SOUND	
D302	L305
D303	L308
D304	L309
D305	L320
D306	Q302
D307	Q303
IC301	Q304
J352	Q305
L301	Q306
L302	Q307
L303	Q308
L304	X301

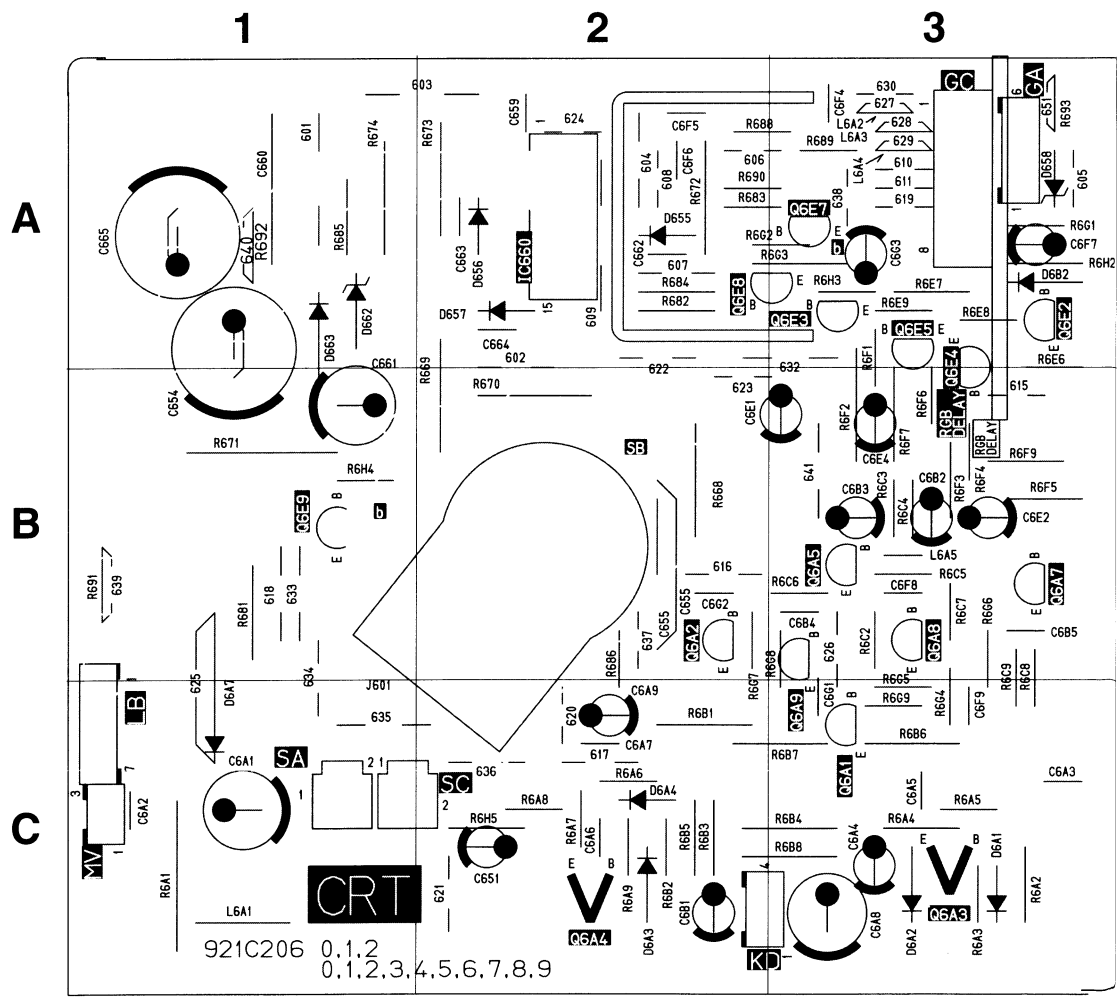


PCB TEXT
IC7701
IC7702
D7701
L7701
L7702
L7704
L7705
L7706
L7707
Q7701
Q7702
Q7703
Q7704
Q7705
Q7706
X7701

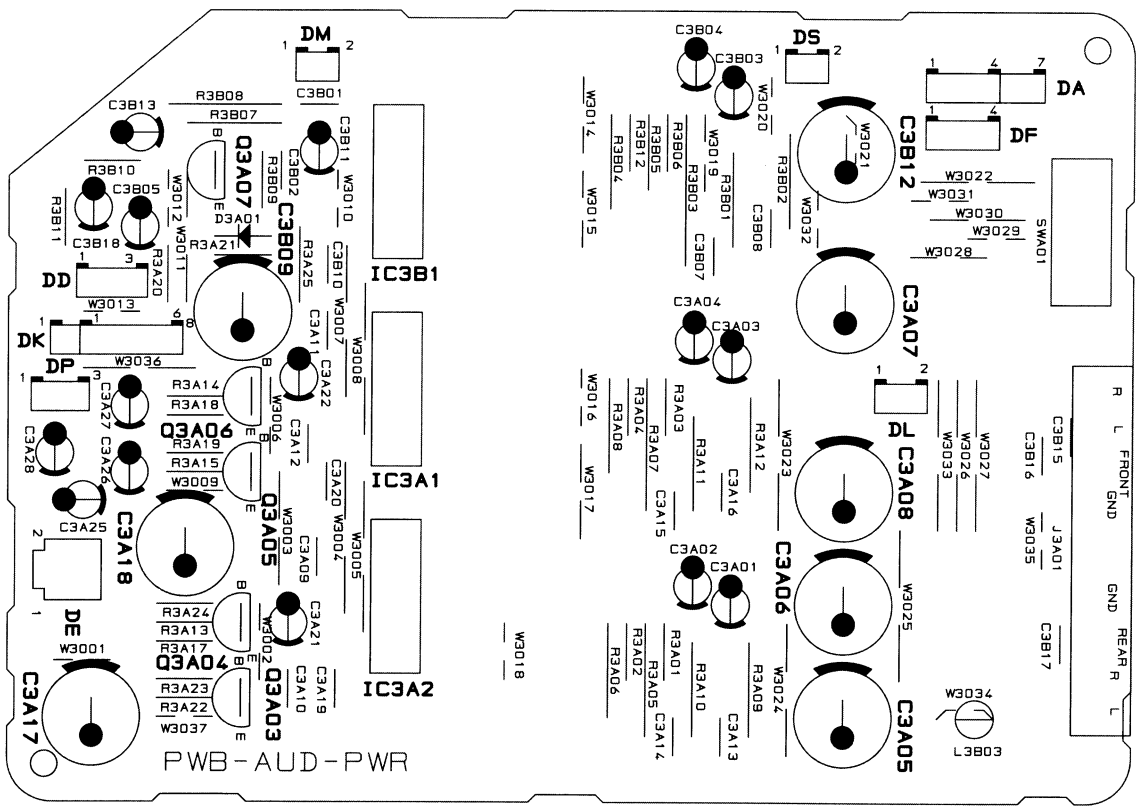


PCB CRT

D655	A2	Q6A4	C2
D656	A2	Q6A5	B3
D657	A2	Q6A7	B3
D658	A3	Q6A8	B3
D662	A1	Q6A9	B3
D663	A1	Q6E2	A3
D6A1	C3	Q6E3	A3
D6A2	C3	Q6E4	B3
D6A3	C2	Q6E5	A3
D6A4	C2	Q6E7	A3
D6A7	C1	Q6E8	A2
D6B2	A3	Q6E9	B1
IC660	A2	R671	B1
J601	B2	R692	A1
L6A1	C1	R6B1	C2
L6A2	A3	R6B4	C3
L6A3	A3	R6B6	C3
L6A4	A3	R6B7	C3
L6A5	B3	R6B8	C3
Q6A1	C3	R6C9	C3
Q6A2	B2	R6G4	C3
Q6A3	C3		



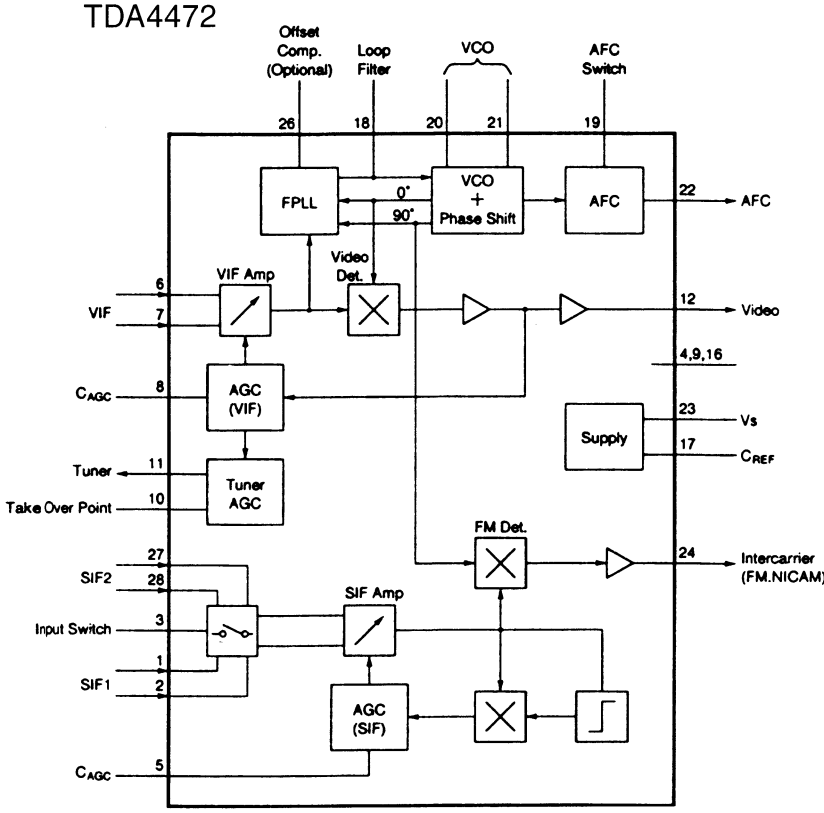
PCB AUDIO-POWER
D3A01
D9A01
IC3A1
IC3A2
IC3B1
J3A01
Q3A03
Q3A04
Q3A05
Q3A06
Q3A07
R3A09
R3A10
R3A11
R3A12
R3B01
R3B02
SWA01



6 IC BLOCK DIAGRAMS

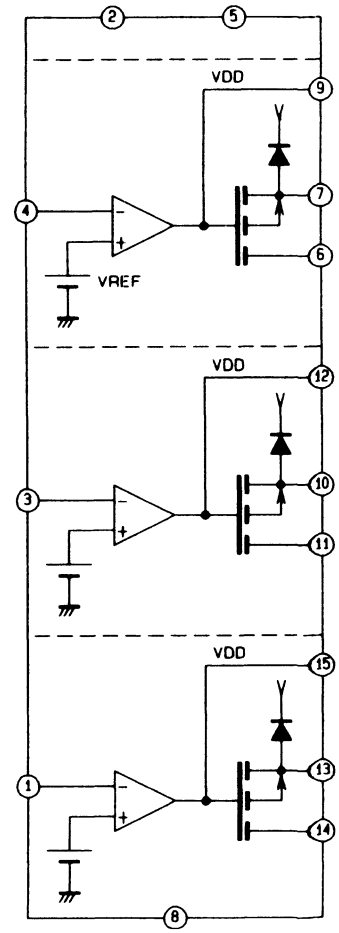
IC101

TDA4472



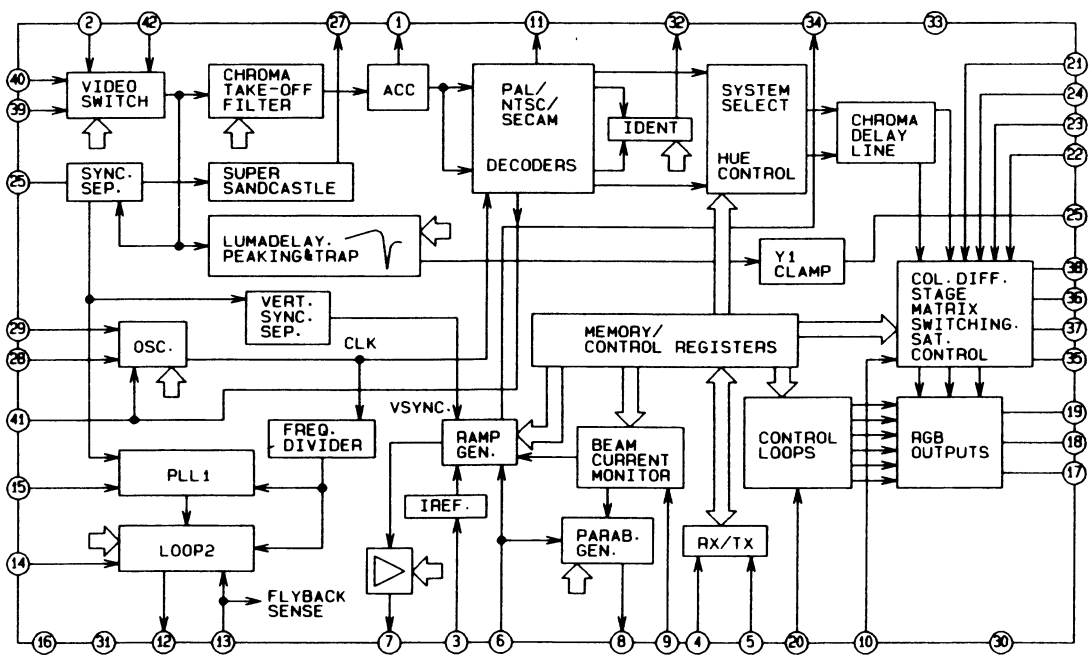
IC660

TEA5101



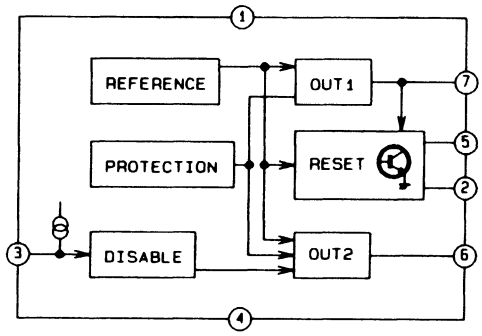
IC201

MC44031



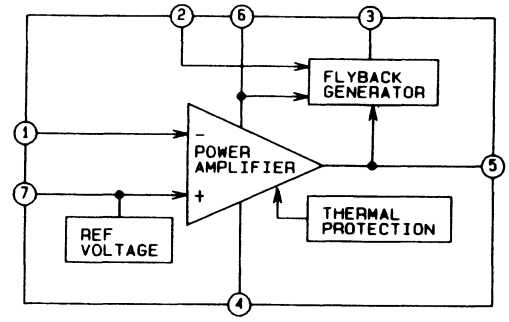
IC951

TDA8137



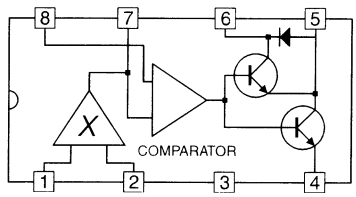
IC401

TDA8171



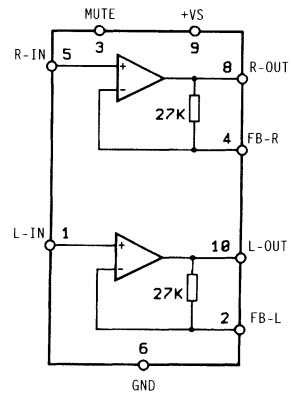
IC551

TEA 2031



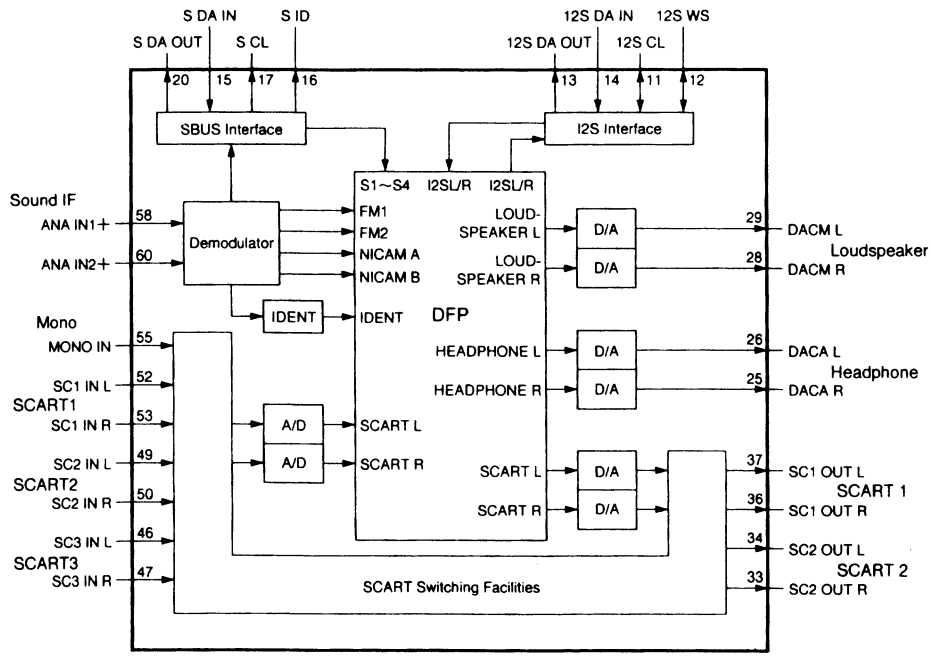
IC3A1, IC3A2, IC3B1

TDA7263



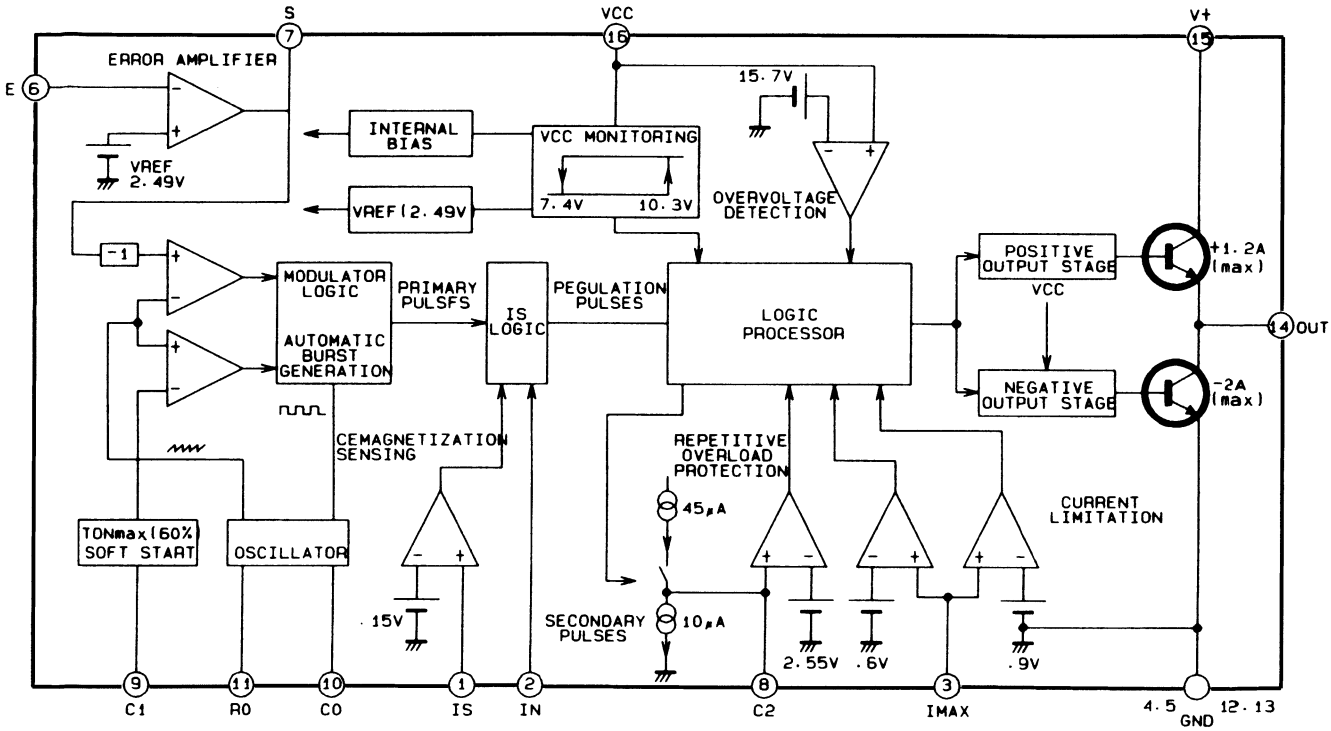
IC301

MSP3410



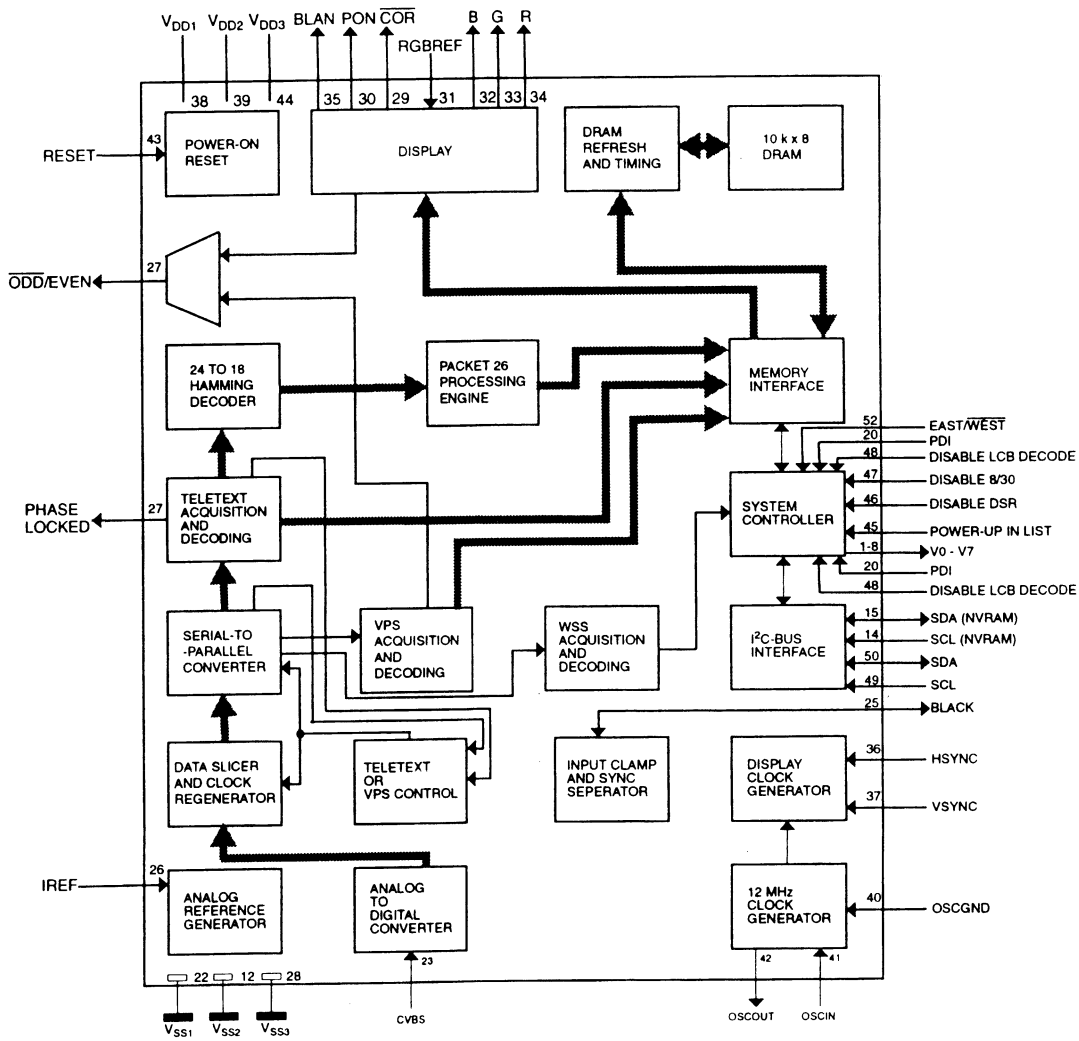
IC901

TEA2261



IC7701

SAA5261PS



7 SCHEMATIC DIAGRAMS

7.1 NOTES

7.1.1 General

- DC voltages are measured from the points indicated to circuit ground.
- Waveforms are for a PAL colour bar signal.
- Test Points are shown as: "TP6A", etc.
- This is a basic circuit diagram – receivers are subject to modification due to continuous engineering improvement.

7.1.2 Servicing Precautions

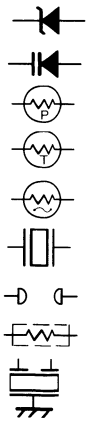
The ⚠ symbol indicates components with characteristics critical to safety and performance.

These parts **must** only be replaced with parts having identical values and characteristics – refer to the Service Parts List for the correct Mitsubishi part numbers.

Do not compromise the safety of the receiver by improper servicing.

7.1.3 Component Information

SPECIFIC SYMBOLS



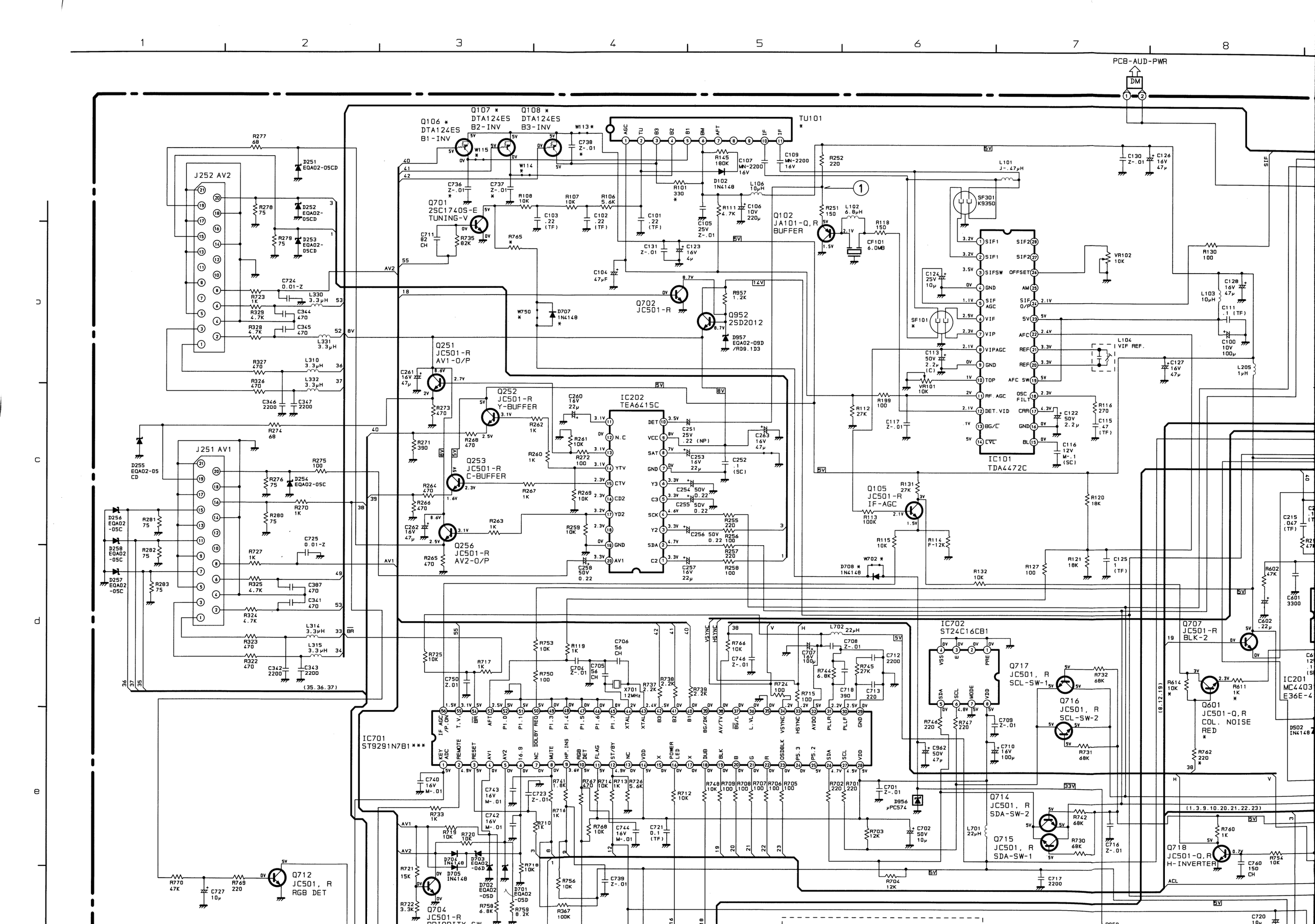
Zener diode
Varicap
Posistor
Thermistor
Fusible resistor
Crystal
Air gap
Part (e.g. resistor) on copper side of PCB
Ceramic filter

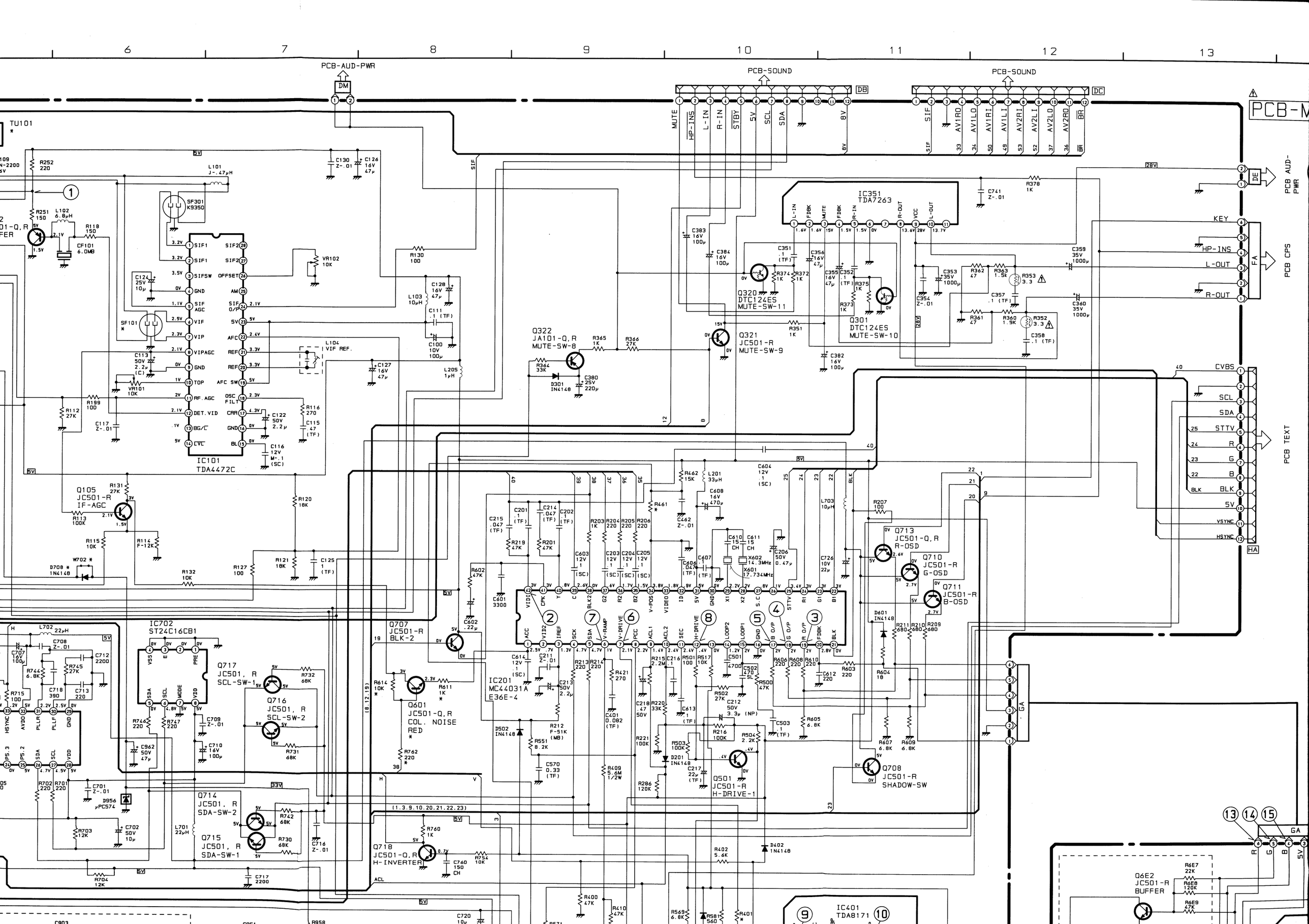
RESISTORS

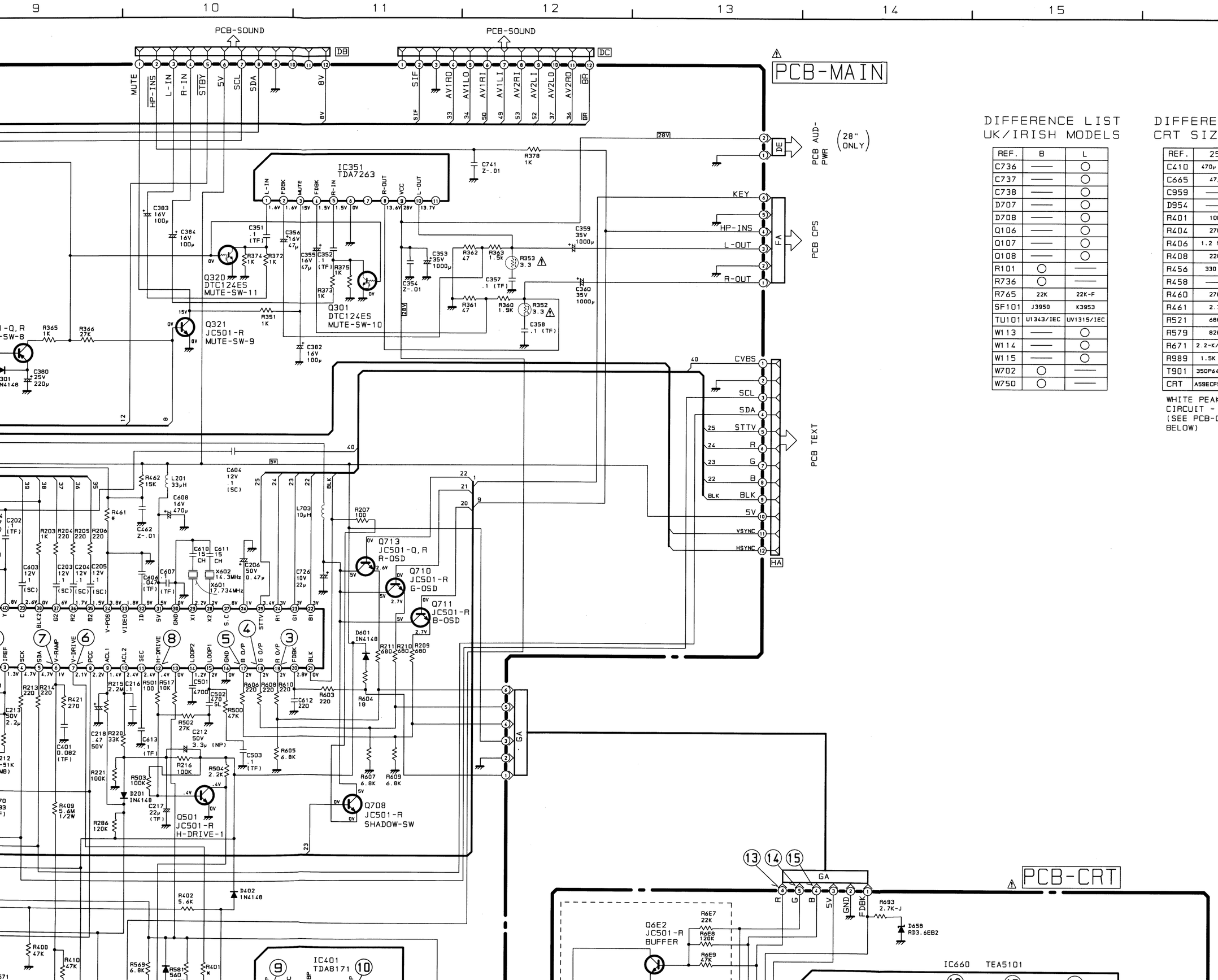
Value	without spec.	Ω, K = KΩ, M = MΩ
Wattage	without spec.	1/4W or 1/6W (chips: 1/10W)
Tolerance	without spec.	±5%
	D = ±0.5%, F = ±1%, G = ±2%, J = ±5%, K = ±10%	
Type	without spec.	Carbon film
	(S)	Composition
	(MB)	Metal oxide film
	(CE)	Cemented
	(W)	Wire wound
	(M)	Metal film
	(MPC)	Metal plate cement
	(ML)	Metal linear

CAPACITORS

Value	without spec.	pF for values >1, µF for values <1
Voltage	without spec.	50V
Tolerance	without spec.	electrolytic: ±20%, others ±10%
	C = ±0.25pF, D = ±0.5pF, F = ±1pF, G = ±2pF or 2%, J = ±5%, K = ±10%, M = ±20%, P = +100 –0%, Z = +80 –20%, Q = +30 –10%, T = +200 –0%	
Type	without spec.	Ceramic
	(MF)	Polyester
	(PP)	Polypropylene film
	(ALM)	Aluminous electrolytic
	(TF)	Twin film
	(SC)	Semiconductor ceramic
	(MP)	Metalised paper
	(MPP)	Metalised plastic film
	(MMF)	Metalised polyester
	(MF.PP)	Polyester/polypropylene film
	(PS)	Polystyrene (styrol)
	(TAN) or (TANT)	Tantalum
		Electrolytic
	(BP) or (NP)	Non-polarised electrolytic
Characteristic	(only ceramic capacitors)	
	without spec.	B or F (high dielectric)
	CH, SL, etc.	Temperature compensating types


PCB-AUD-PWR
DM
TU101
IC101 TDA4472C
IC201 MC4403 E36E-4
IC701 ST9291N7B1 ***
IC702 ST24C16CB1
J252 AV2
J251 AV1
Q106 * DTA124ES B1-INV
Q107 * DTA124ES B2-INV
Q108 * DTA124ES B3-INV
Q701 2SC1740S-E TUNING-V
Q702 JC501-R
Q102 JA101-Q, R BUFFER
Q251 JC501-R AV1-O/P
Q252 JC501-R Y-BUFFER
Q253 JC501-R C-BUFFER
Q256 JC501-R AV2-O/P
Q105 JC501-R IF-AGC
Q704 JC501-R PRIORITY SW
Q712 JC501, R RGB DET
Q717 JC501, R SCL-SW-1
Q716 JC501, R SCL-SW-2
Q714 JC501, R SDA-SW-2
Q715 JC501, R SDA-SW-1
Q707 JC501-R BLK-2
Q601 JC501-Q, R COL. NOISE RED *
Q718 JC501-Q, R H-INVERTER
Q952 2SD2012
IC202 TEA6415C
SF301 K9350
SF101 *
L104 VIF REF.
D707 1N4148 *
D957 EQA02-09D /RD9.1D3
D956 μPC574
D708 * 1N4148
D251 EQA02-05CD
D252 EQA02-05CD
D253 EQA02-05CD
D254 EQA02-05C
D255 EQA02-05 CD
D256 EQA02-05C
D257 EQA02-05C
D258 EQA02-05C
D701 EQA02-05D
D702 EQA02-05D
D703 EQA02-06D
D704 IN4148
D705 IN4148
D502 IN4148
CF101 6.0MB
X701 12MHz
W750 *
W113 *
W114 *
W115 *
W702 *
(35.36.37)
(1.3.9.10.20.21.22.23)
(8.12.19)


6
7
8
9
10
11
12
13
PCB-AUD-PWR
DM
PCB-SOUND
DB
MUTE
HP-INS
L-IN
R-IN
STBY
5V
SCL
SDA
8V
PCB-SOUND
DC
SIF
AV1RO
AV1LO
AV1RI
AV1LI
AV2RI
AV2LI
AV2LO
AV2RO
BR
PCB-M
TU101
*
R252
220
L101
J-.47μH
C130
Z-.01
C126
16V
47μ
SF301
K9350
R251
150
L102
6.8μH
R118
150
CF101
6.0MB
VR102
10K
R130
100
C128
16V
47μ
L103
10μH
C111
.1 (TF)
C100
10V
100μ
SF101
*
L104
VIF REF.
C113
50V
2.2μ
(C)
VR101
10K
R199
100
R112
27K
C117
Z-.01
C127
16V
47μ
L205
1μH
IC101
TDA4472C
SIF1
SIF2
SIFSW
OFFSET
GND
AM
SIF AGC
SIF O/P
VIF
5V
VIPAGC
AFC
REF
GND
REF
TOP
AFC SW
RF. AGC
OSC FILT
DET. VID
CRR
BG/C
GND
CVC
BL
C124
25V
10μ
C122
50V
2.2μ
R116
270
C115
.47
(TF)
C116
12V
M-.1
(SC)
Q105
JC501-R
IF-AGC
R131
27K
R113
100K
R115
10K
R114
F-12K
R120
18K
R121
18K
R127
100
C125
1
(TF)
R132
10K
D708 *
1N4148
W702 *
IC351
TDA7263
L-IN
FDBK
MUTE
FDBK
R-IN
R-OUT
VCC
L-OUT
C383
16V
100μ
C384
16V
100μ
C351
.1
(TF)
C356
16V
47μ
C355
.1
(TF)
C352
.1
(TF)
R372
1K
R374
1K
R375
1K
R373
1K
Q320
DTC124ES
MUTE-SW-11
Q301
DTC124ES
MUTE-SW-10
Q321
JC501-R
MUTE-SW-9
R351
1K
C382
16V
100μ
R378
1K
C741
Z-.01
C358
35V
1000μ
C353
35V
1000μ
C354
Z-.01
C360
35V
1000μ
R362
47
R363
1.5K
R353
3.3
C357
.1 (TF)
R361
47
R360
1.5K
R352
3.3
C358
.1 (TF)
Q322
JA101-Q,R
MUTE-SW-8
R365
1K
R366
27K
R364
33K
D301
IN4148
C380
25V
220μ
28V
DE
PCB AUD-PWR
KEY
HP-INS
L-OUT
R-OUT
FA
PCB CPS
CVBS
SCL
SDA
STTV
R
G
B
BLK
5V
VSYNC
HSYNC
HA
PCB TEXT
IC702
ST24C16CB1
VSS
E
PRE
SDA
SCL
MODE
VDD
Q717
JC501, R
SCL-SW-1
Q716
JC501, R
SCL-SW-2
R732
68K
R731
68K
R746
220
R747
220
C709
Z-.01
C710
16V
100μ
C962
50V
47μ
L702
22μH
C708
Z-.01
C707
16V
100μ
C712
2200
R744
6.8K
R745
27K
C718
390
C713
220
R715
100
HSYNC
AVDD
PLLR
PLLF
GND
SDA
SCL
VDD
Q714
JC501, R
SDA-SW-2
Q715
JC501, R
SDA-SW-1
R742
68K
R730
68K
R702
220
R701
220
R703
12K
R704
12K
C701
Z-.01
D956
μPC574
C702
50V
10μ
L701
22μH
C716
Z-.01
C717
2200
Q707
JC501-R
BLK-2
R614
10K
*
R611
1K
*
Q601
JC501-Q,R
COL. NOISE
RED
*
R762
220
*
(18.12.19)
IC201
MC44031A
E36E-4
C614
12V
.1
(SC)
C211
Z-.01
C213
50V
2.2μ
R213
220
R214
220
R421
270
C201
.082
(TF)
D502
IN4148
R551
8.2K
R212
F-51K
(MB)
C570
0.33
(TF)
R409
5.6M
1/2W
R218
2.2M
C216
.1
R501
100
R517
10K
C501
4700
C502
470
5%
R500
47K
R606
220
R608
220
R610
220
C612
220
R603
220
R604
18
R607
6.8K
R609
6.8K
R605
6.8K
R502
27K
C212
50V
3.3μ (NP)
R216
100K
R503
100K
R504
2.2K
C503
.1
(TF)
D201
IN4148
C217
22μ
(TF)
Q501
JC501-R
H-DRIVE-1
R220
33K
R221
100K
R286
120K
C218
.47
50V
R462
15K
L201
33μH
C608
16V
470μ
C462
Z-.01
C604
12V
.1
(SC)
R461
*
C201
.1
(TF)
C214
.047
(TF)
C202
.1
(TF)
R203
1K
R204
220
R205
220
R206
220
C215
.047
(TF)
R219
47K
R201
47K
C603
12V
.1
(SC)
C203
12V
.1
(SC)
C204
12V
.1
(SC)
C205
12V
.1
(SC)
C610
15
CH
C611
15
CH
X602
14.3MHz
X601
17.734MHz
C607
.1
(TF)
C606
.047
(TF)
C206
50V
0.47μ
C726
10V
22μ
L703
10μH
R207
100
Q713
JC501-Q,R
R-OSD
Q710
JC501-R
G-OSD
Q711
JC501-R
B-OSD
D601
IN4148
R211
680
R210
680
R209
680
Q708
JC501-R
SHADOW-SW
R602
47K
C602
.22μ
C601
3300
R760
1K
Q718
JC501-Q,R
H-INVERTER
R754
10K
C760
150
CH
C720
10μ
R400
47K
R410
47K
R569
6.8K
R581
560
R401
*
R402
5.6K
D402
1N4148
IC401
TDA8171
Q6E2
JC501-R
BUFFER
R6E7
22K
R6E8
120K
R6E9
47K
GA
R
G
B
5V
(1.3.9.10.20.21.22.23)
ACL
VIDI
CPK
Y
C
BLK2
G2
R2
B2
V-POS
VIDEO
ID
5V
GND
XI
X2
S.C
STTV
R1
G1
B1
ACC
VID2
IREF
SCK
SDA
Y-RAMP
Y-DRIVE
PCC
ACL1
ACL2
SEC
H-DRIVE
LOOP2
LOOP1
GND
B O/P
G O/P
R O/P
FDBK
BLK



DIFFERENCE LIST UK/IRISH MODELS

REF.	B	L
C736	——	○
C737	——	○
C738	——	○
D707	——	○
D708	——	○
Q106	——	○
Q107	——	○
Q108	——	○
R101	○	——
R736	○	——
R765	22K	22K-F
SF101	J3950	K3953
TU101	U1343/IEC	UV1315/IEC
W113	——	○
W114	——	○
W115	——	○
W702	○	——
W750	○	——

DIFFERENCE LIST CRT SIZE

REF.	25"	28"
C410	470µ 50V	1000µ 50µ
C665	47µF	100µF
C959	——	○
D954	——	○
R401	10K	15K
R404	27K	18K
R406	1.2 1/2W	1.5 1/2W
R408	220	330
R456	330 1W	220 1W
R458	——	○
R460	27K	10K
R461	2.7K	5.6K
R521	68K	56K
R579	82K	120K
R671	2.2-K/J 1W	0.68-K/J 1W
R989	1.5K 1W	2.2K 2W
T901	350P646040	350P646050
CRT	A59ECF50X12	A66EHJ43X01

WHITE PEAK LIMITER CIRCUIT - 28" ONLY (SEE PCB-CRT CIRCUIT BELOW)

IC101
TDA4472C

IC202
TEA6415C

IC701
ST9291N7B1***

IC702
ST24C16CB1

IC951
TDA8137

J251 AV1

Q252
JC501-R
Y-BUFFER

Q253
JC501-R
C-BUFFER

Q256
JC501-R
AV2-O/P

Q105
JC501-R
IF-AGC

Q717
JC501, R
SCL-SW-1

Q716
JC501, R
SCL-SW-2

Q714
JC501, R
SDA-SW-2

Q715
JC501, R
SDA-SW-1

Q707
JC501-R
BLK-2

Q601
JC501-Q, R
COL. NOIS
RED

Q718
JC501-Q, R
H-INVERTER

Q712
JC501, R
RGB DET

Q704
JC501-R
PRIORITY-SW

Q703
JA101-Q
SW-PROTECT

Q705
JA101-Q
LED-SW-1

Q706
JA101-Q
LED-SW-2

Q902
JC501-R

Q901
S2000N
REG OUT

D708 *
1N4148

D704
IN4148

D705
IN4148

D702
EQA02
-05D

D701
EQA02
-05D

D706
EQA02-12AB

D255
EQA02-05
CD

D254
EQA02-05C

D256
EQA02
-05C

D258
EQA02
-05C

D257
EQA02
-05C

D956
μPC574

S991

RP991

X701
12MHz

T901
*

L701
22μH

L702
22μH

L314
3.3μH

L315
3.3μH

L995

L991

L903

L905

ADG-COIL

FC

PCB-MAIN

L
SP392

R
SP391

COLD
LIVE

(35.36.37)

(8.12.19)

(1.3.9.10.20.21.2

ACL

IC101
TDA4472C

Q105
JC501-R
IF-AGC

IC702
ST24C16CB1

Q717
JC501, R
SCL-SW-1

Q716
JC501, R
SCL-SW-2

Q714
JC501, R
SDA-SW-2

Q715
JC501, R
SDA-SW-1

Q707
JC501-R
BLK-2

Q601
JC501-Q,R
COL. NOISE
RED

IC201
MC44031A
E36E-4

Q718
JC501-Q,R
H-INVERTER

Q713
JC501-Q,R
R-OSD

Q710
JC501-R
G-OSD

Q711
JC501-R
B-OSD

Q708
JC501-R
SHADOW-SW

Q501
JC501-R
H-DRIVE-1

IC401
TDA8171

Q902
JC501-R

Q901
S2000N
REG OUT

IC951
TDA8137

IC551
TEA2031A

Q551
2SC2482

Q552
S2055N

T901

T551
FBT

Q6E2
JC501-R
BUFFER

Q6E3
JC501-R
WPL-R

Q6E4
JC501-R
WPL-G

Q6E5
JC501-R
WPL-B

28" ONLY
WHITE PEAK
LIMITER CIRCUIT

WHITE PEAK LIMITER CIRCUIT - 28" ONLY (SEE PCB-CRT CIRCUIT BELOW)

PCB TEXT

SCL
SDA
STTV
R
G
B
BLK
5V
VSYNC
HSYNC
HA

C604 12V .1 (SC)
R462 15K
L201 33µH
C608 16V 470µ
R461 *
C462 Z-.01
L703 10µH
R207 100
C610 15 CH
C611 15 CH
X602 14.3MHz
X601 17.734MHz
C607 .047 (TF)
C606 .047 (TF)
C206 50V 0.47µ
C726 10V 22µ
C202 .1 (TF)
R203 1K
R204 220
R205 220
R206 220
C603 12V 1 (SC)
C203 12V 1 (SC)
C204 12V .1 (SC)
C205 12V .1 (SC)

Q713 JC501-Q, R R-OSD
Q710 JC501-R G-OSD
Q711 JC501-R B-OSD
D601 IN4148
R211 680
R210 680
R209 680

C213 50V 2.2µ
R213 220
R214 220
R421 270
C401 0.082 (TF)
R215 2.2M
C216 .1
R501 100
R517 10K
C501 4700
C502 470 SL
R500 47K
R606 220
R608 220
R610 220
R603 220
C612 220
R604 18
R502 27K
C218 .47 50V
R220 33K
C613 .1 (TF)
C212 50V 3.3µ (NP)
R216 100K
R503 100K
R504 2.2K
C503 .1 (TF)
R605 6.8K
R607 6.8K
R609 6.8K
R221 100K
D201 IN4148
C217 22µ (TF)
R286 120K
R409 5.6M 1/2W

Q501 JC501-R H-DRIVE-1
Q708 JC501-R SHADOW-SW

R402 5.6K
D402 1N4148
R400 47K
R410 47K
R569 6.8K
R581 560 1/2W
R401 *
D501 EQA02-08C
R413 10K
L560 39µH
D504 BYD33G
C552 Z-.01
R411 5.6W 1/2W

IC401 TDA8171
I/P VCC VFBP O/P

C403 35V 220µ
C404 1000 (MF)
C409 100V .1 (MF)
L401
C406 1µ (TF)
C405 .01 (TF)
R408 1/2W *
D401 IN4003D
C407 0.1 (TF)
R405 8.2K (MB)
R406 1/2W
R407 1.5 1/2W
C411 50V 330µ
C410 50V *
C412 220 SL
R404 *
R403 18K
C402 50V 47µ

DY

C506 8500V 4700
T552
R509 33 1/2W
R508 3.9K 5W (CE)
R507 10K 1/2W
C505 8500V 680 (CE)
C504 8500V 330
Q551 2SC2482
R505 12K
R506 2.2K
D503 1N4148
R511 2.7 10W

R512 1K 2W
L551

T551 FBT

L502 1µH
C5B3 2000V 3300
Z552 2000mA
Q552 S2055N
L503
L504 15µH
D506 BYW96E
C5A3 2000V 9100 (MPP)
D505 BY228
D525 BYD33G
C525 160V 1µ
R525 33K 1/2W
C5C3 250V .82 (MPP)
C5D3 400V .39
C510 1600V .018 (MPP)

C516 500V 2200
C520 350V 22µ
D509 BYD33G
R513 .82 1/2W
EHT
FOCUS ADJ
SCREEN ADJ
D508 BYD33G
R514 .82 1/2W
C521 400V .015 (PP)
R521 *
R520 47K
TP
C518
C517 500V
R515 560

R577 1M 1/2W
L505 1µH

28" ONLY WHITE PEAK LIMITER CIRCUIT

Q6E2 JC501-R BUFFER
R6E7 22K
R6E8 120K
R6E9 47K
R6E6 1K
R6H3 4.7K
Q6E3 JC501-R WPL-R
R6F1 180
C6E1 50V 10µ
R6F2 270
Q6E4 JC501-R WPL-G
R6F9 220 1/2W
R6F4 680
Q6E5 JC501-R WPL-B
R6F5 68
R6F6 180
R6F7 330
C6E4 50V 10µ

GA
R G B 5V GND FDBK
R693 2.7K-J
D658 RD3.6EB2

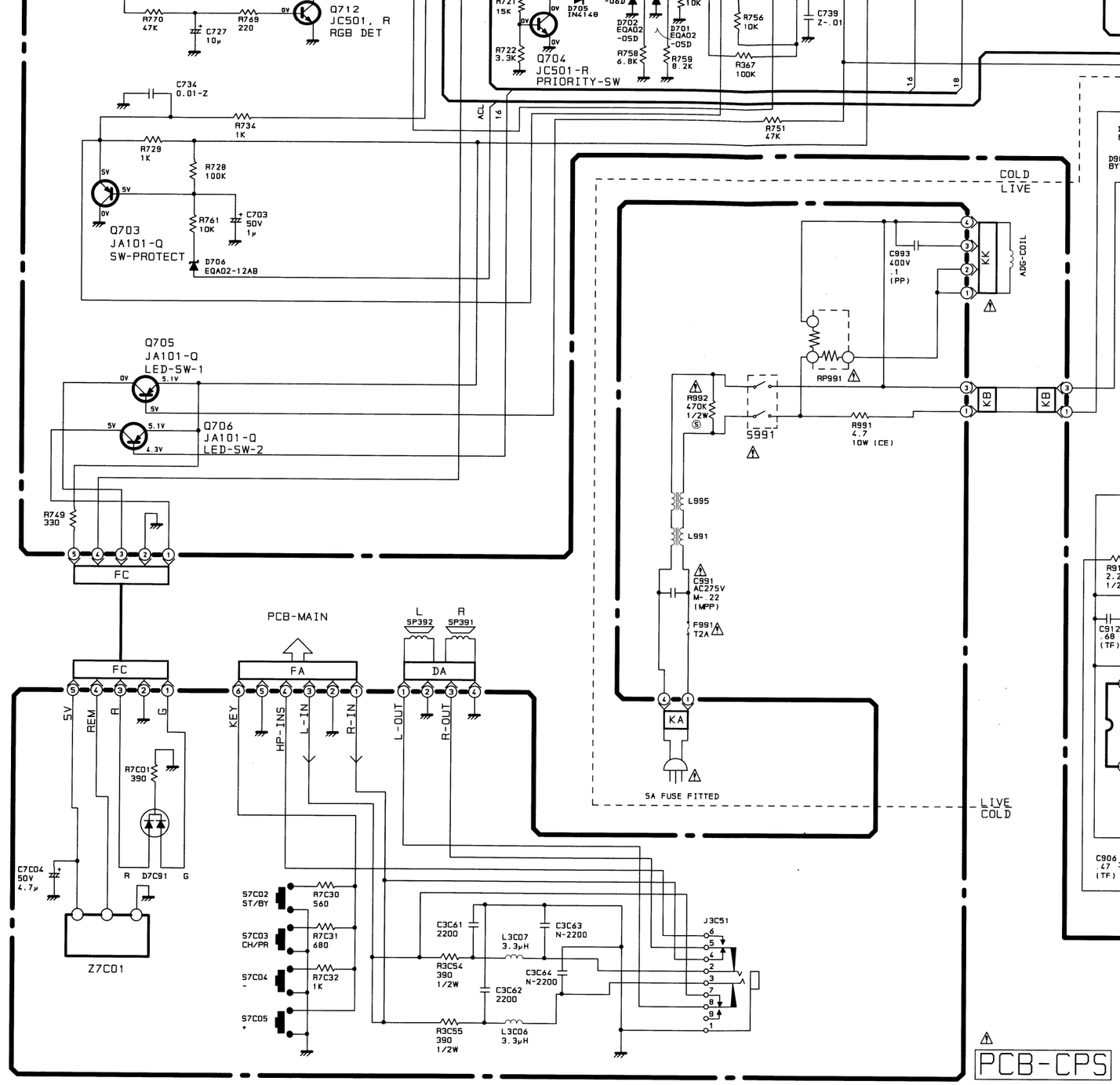
IC660 TEA5101
RIN 12V GIN BIN 200V FDBK BOUT GOUT FDBK ROUT FDBK

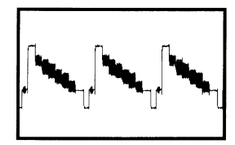
C6F5 56 SL 50V
C659 .22 (TF)
C6F4 330 SL 50V
C6F6 47 SL 50V
R692 100-J 1/2W
C660 400V .1
C663 500V 180
D656 IN4148
C662 500V 330
D655 IN4148
C664 500V 120
D657 IN4148
R689 220
R690 220
R688 220
R683 1K
R673 39K 2W (MB)
R672 39K 2W (MB)
R682 1K
R684 1K
R674 39K 2W (MB)
R694 10 1/2W

R6G1 33K
C6F7 16V 22µ
Q6E8 950-Y SPOT-2
R6G2 12K
R6G3 1.5K
C6G3 25V 100µ
Q6E7 JC501-R SPOT-1
D6B2 BYD33G
C665 250V *
C651 16V 47µ
R6H5 1/2W 470

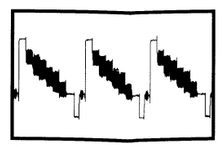
PCB-CRT

J601 SOCKET-CRT
CRT *
G2
F2
FOCUS
D6A7 BYV96E
R670 2.7K 1/2W
R668 2.7K 1/2W
R669 2.7K 1/2W



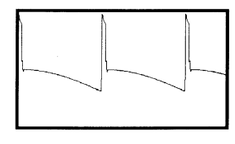


1 2.1V p-p (H)

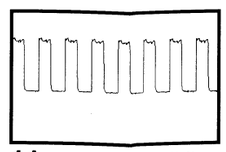


2 1.1V p-p (H)

3



10 52V p-p (V)



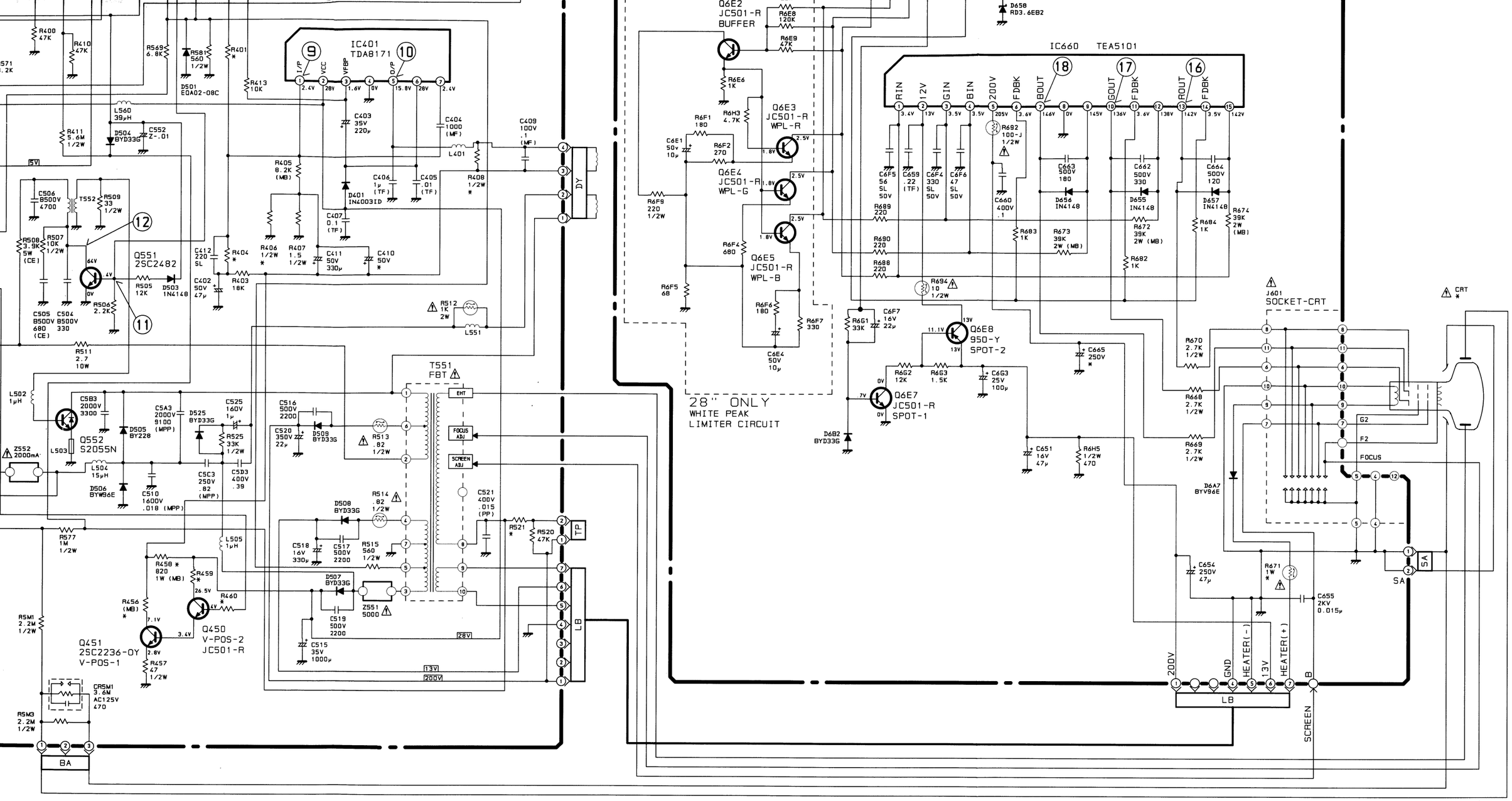
11 0.8V p-p (H)

12

COLD
LIVE

C739 Z-.01
R751 47K
R704 12K
C717 2200
5V
ACL
C903 R1KV 2200
D904 BYW56
D901 BYW56
C901 R1KV 2200
D903 BYW56
D902 BYW56
C902 R1KV 2200
C904 400V 150μ
R922 22K 2W (MB)
R901 22K 2W (MB)
R902 22K 2W (MB)
D905 BYD33G
C905 25V 470μ
T901 *
C951 R2KV 1000
D951 BYW96E
L951 390μH
C952 200V 100μ
C953 200V 100μ
R958 22K 3W (MB)
Z951 3150mA
C954 500V 1000
D952 BYW96E
Z953 1600mA
C966 500V 1000
D959 BYW95B
Z952 5000mA
C958 500V 1000
D953 BYW95B
D954 * BYW95B
C959 * 500V 1000
C967 35V 1000μ
C960 35V 1000μ
14V
28V
IC951 TDA8137
1/P 11.3V
SW 2.8V
4.8V
RST 0V
5V
5V
SWSV 5V
C957 .22 (TF)
R951 1K
C955 16V 3300μ
R959 5.6K
C956 6.3V 470μ
C720 10μ 25V
R571 8.2K
R400 47K
R410 47K
R569 6.8K
D581 560 1/2W
D501 EQA02-08C
R401 *
R413 10K
IC401 TDA8171
9
10
1/P 2.4V
VCC 28V
VFBP 1.6V
0V
O/P 15.8V
28V
2.4V
C403 35V 220μ
C404 1000 (MF)
C409 100V .1 (MF)
L401
R411 5.6M 1/2W
L560 39μH
D504 BYD33G
C552 Z-.01
R405 8.2K (MB)
C406 1μ (TF)
C405 .01 (TF)
R408 1/2W *
D401 IN4003ID
C407 0.1 (TF)
R406 1/2W *
R407 1.5 1/2W
C411 50V 330μ
C410 50V *
C412 220 SL
C402 50V 47μ
R404 *
R403 18K
C506 B500V 4700
T552
R509 33 1/2W
R508 3.9K 5W (CE)
R507 10K 1/2W
C505 B500V 680 (CE)
C504 B500V 330
12
64V
4V
0V
Q551 2SC2482
R505 12K
D503 1N4148
R506 2.2K
11
R512 1K 2W
L551
R511 2.7 10W
R567 3.9K
D562 IN4148
D563 IN4148
R560 1K
C568 .1 (TF)
C569 35V 1000μ
R582 150K
D560 IN4148
R589 (MB) *
C575 .082 (TF)
C567 4700 (MF)
1.3V 1.3V 2.8V 12.6V
VCC O/P
IC551 TEA2031A
6.2V 6.2V 6.2V 0V
R570 22K
R580 820K
R579 *
D561 RD39FB2
R573 F-33K (MB)
R574 F-22K (MB)
R575 F-18K (MB)
L502 1μH
C583 2000V 3300
Z552 2000mA
L503
Q552 2S055N
L504 15μH
D506 BYW96E
C5A3 2000V 9100 (MPP)
D525 BYD33G
C525 160V 1μ
R525 33K 1/2W
C5C3 250V .82 (MPP)
C5D3 400V .39
C510 1600V .018 (MPP)
T551 FBT
C516 500V 2200
C520 350V 22μ
D509 BYD33G
R513 .82 1/2W
EHT
FOCUS ADJ
SCREEN ADJ
D508 BYD33G
R514 .82 1/2W
C518 16V 330μ
C517 500V 2200
R515 560 1/2W
C521 400V .015 (PP)
R521 *
R520 47K
1/P
D507 BYD33G
Z551 5000
C519 500V 2200
C515 35V 1000μ
28V
13V
200V
LB
DY
R577 1M 1/2W
L505 1μH
R458 * 820 1W (MB)
R459 *
26.5V
R460 *
4V
R456 (MB) *
7.1V
3.4V
Q450 V-POS-2 JC501-R
Q451 2SC2236-OY V-POS-1
2.8V
R457 47 1/2W
R5M1 2.2M 1/2W
CR5M1 3.6M AC125V 470
R5M3 2.2M 1/2W
BA
RP991
R991 4.7 10W (CE)
C993 400V .1 (PP)
KK
KB
KB
ADG-COIL
991
Q902 JC501-R
0V
4V
0V
R912 82K
R913 150K
C910 .47 (TF)
C911 1000 (MF)
R914 2.2M 1/2W
C913 .027 (MF)
R923 100
C912 .68 (TF)
R915 8.2 2W (MB)
IC901 TEA2261 REG CONT
C907 560 (MF)
C909 1μ (TF)
R907 1.5K
R904 2.2K
C906 .47 (TF)
R906 5.6K
D908 IN4148
R916 1 1/4W
R917 1 1/4W
R918 18 1/2W
L901 2.2μH
Q901 S2000N REG OUT
C914 35V 47μ
D906 BYV96E
L903
C915 R2KV 470
L905
C917 R2KV 1000
R921 1.8K 5W (CE)
D907 RD3.0FB2
R919 100
R905 1K
R908 .33 2W (MB)
R909 .22 2W (MB)
D909 RD3.0FB2
R911 2.2K
C981 AC400V 4700
R981 6.8M 1/2W
R982 6.8M 1/2W
PC851 TCDT1124G
R963 330 1/2W
Q951 JC501-R ERROR AMP
R954 160K (MB)
VR951 20K
DC-SET
R962 27 1K
R955 8.2K (MB)
7.5V
6.2V
6.1V
R956 1.5K
D955 EQA02-06E /R.D6.2EB3
LIVE
COLD
PCB-CPS

1 2.1V p-p (H)
2 1.1V p-p (H)
3 2.0V p-p (H)
4 2.0V p-p (H)
5 2.0V p-p (H)
6 1.6V p-p (V)
7 1.6V p-p (V)
8 0.6
10 52V p-p (V)
11 0.8V p-p (H)
12 220V p-p (H)
13 1.2V p-p (H)
14 1.3V p-p (H)
15 1.4V p-p (H)
16 86V p-p (H)
17 87



5 2.0V p-p (H)

6 1.6V p-p (V)

7 1.6V p-p (V)

8 0.62V p-p (H)

9 0.5V p-p (V)

14 1.3V p-p (H)

15 1.4V p-p (H)

16 86V p-p (H)

17 87V p-p (H)

18 97V p-p (H)

C25S7B **C28S7B**
C25C7B **C28C7B**
C25S7L **C28S7L**

MITSUBISHI ELECTRIC

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PCB-MAIN

PCB-MAIN

DB

DC

MUTE HP-INS L-OUT R-OUT STNDBY 5V SCL SDA 8V

SIF AV1RO AV1LO AV1RI AV1LI AV2RI AV2LI AV2LO AV2RO BR

R340 100

R341 100

C340 Z-.01

D303 1N4148

D305 1N4148

D306 1N4148

C327 25V 22µ (NP)

C328 25V 22µ (NP)

L301 1µH

C305 25V Z-.01

C311 50V .33

C314 16V 47µ

C313 16V 47µ

C320 50V 3.3µ

C321 16V 47µ

L302 1µH

C301 12 CH

C304 Z-.01

C307 16V 47µ

C310 25V 10µ

C312 50V .33

C319 12V .1 (SR)

C322 .01

C325 25V 22µ (NP)

C326 25V 22µ (NP)

R356 100

R357 100

C302 12 CH

X301 18.432

C306 Z-.01

C308 12V .1 (SR)

L309 3.3µH

L308 3.3µH

C317 470

C318 470

C323 25V 10µ

C324 25V 10µ

R358 100

R359 100

C303 Z-.01

R344 0

DVSS XTAL OUT XTAL IN TEST1 ANA_ IN_- ANA_ IN_+ AVSUP AVSS MONO IN VREFTOP AV2R1 AV2L1 AS61 AV1R1 AV1L1 AS62 AGND1 PDMC2 PDMC1 AGNDC AHVSS CAPL_M AHVSUP CAPL_A AV2LO AV2RO VREF1 AV1LO AV1RO

DVSS DVSS ADDR. SEL STANDBY0 DVSS SCL SDA DVSUP DVSS RESET0 VREF2 DACH_R DACH_L TEST2 C_DACS_R C_DACS_L

IC301 MSP3410D-B3

R303 10K

R304 220

R305 220

R347 0

C338 Z-.01

C337 50V 1µ

L303 1µH

C339 16V 47µ

D304 1N4148

R311 100K

C330 390

C329 390

C332 2200

C331 2200

R313 *

R312 *

Q308 JA101-Q R-BUFFER

Q307 JA101-Q L-BUFFER

C335 25V 10µ

C336 25V 10µ

C333 Z-.01

C334 Z-.01

5V

R314 82K

R315 82K

R316 82K

R317 82K

Q302 JC501-R LINE-OUT-R-BUF

Q303 JC501-R LINE-OUT-L-BUF

R320 560

L304 3.3µH

C368 16V 100µ

C365 2200

R321 560

L305 3.3µH

C367 16V 100µ

C366 2200

R318 820

R319 820

R334 * 3.3K

R335 * 3.3K

R342 * 10K

R333 22K

Q305 JC501-R LINE-OUT-SW

C369 68 SL

C370 10µ

Q306 * JC501-R HP-MUTE

R343 * 47K

D302 1N4148

R337 100K *

R348 560

D307 1N4148

R336 100K *

Q304 * JC501-R WOOFER-BUFFER

R338 270 *

J352 R L

L + R

MUTE

DD

PCB-AUDIO-POWER 28" ONLY

BR SDA SCL HE

DIFFERENCE TABLE

REF	25"	28"
Q304	—	○
Q306	—	○
R312	1K-K	470-K
R313	1K-K	470-K
R334	—	○
R335	—	○
R336	—	○
R337	—	○
R338	—	○
R342	—	○
R343	—	○

⚠ PCB-SOUND

MSP3410D-B3

R3102 10K
R3103 220
R3104 220

C336 Z-.01
C337 50V 1μ
L303 1μH
C339 16V 47μ
D304 1N4148
R311 100K

C332 2200
R313 *
R312 *
C331 2200
Q308 JA101-Q R-BUFFER
Q307 JA101-Q L-BUFFER
C335 25V 10μ
R316 82K
LINE-OUT-R-BUF

C336 25V 10μ
C333 Z-.01
Q303 JC501-R LINE-OUT-L-BUF
R317 82K
C334 Z-.01

R320 560
L304 3.3μH
C365 2200
C368 16V 100μ
R321 560
L305 3.3μH
C366 2200
C367 16V 100μ

R318 820
R319 820
R334 * 3.3K
R335 * 3.3K
R342 * 10K
R333 22K

Q306 * JC501-R HP-MUTE
R343 * 47K
D302 1N4148

Q305 JC501-R LINE-OUT-SW
C369 68 9L
C370 10μ

R337 100K *
R348 560
D307 1N4148
R336 100K *
Q304 * JC501-R WOOFER-BUFFER
R338 270 *

L +
MUTE

⚠ PCB-SOUND

PCB-SOUND

DD

L + R
MUTE

R3810 2.2K
C3813 16V 100μ
C3805 50V 1μ
R3808 1K
R3809 2.2M
C3801 .1 (TF)

IC3B1
TDA7263

1/P	F/B	MUTE	F/B	1/P	GND	N.C	O/P	VCC	O/P	N.C
1	2	3	4	5	6	7	8	9	10	11
1.4V	5.4V	3.3V	5.4V	1.4V	0V	0V	0.2V	28V	0.1V	0V

28V

R3807 1K
C3811 16V 47μ
C3804 25V 47μ
C3802 .1 (TF)
C3808 .1 (TF)
R3804 3.3K
R3802 3.3 1/4W ⚠
C3803 25V 47μ
R3805 47
R3803 1.5K
R3806 47
C3807 .1 (TF)
R3801 3.3 1/4W ⚠
C3810 .01
C3809 35V 1000μ

PCB-MAIN
DM
0V
0.2V
Q3A07 DTC124ES
0V

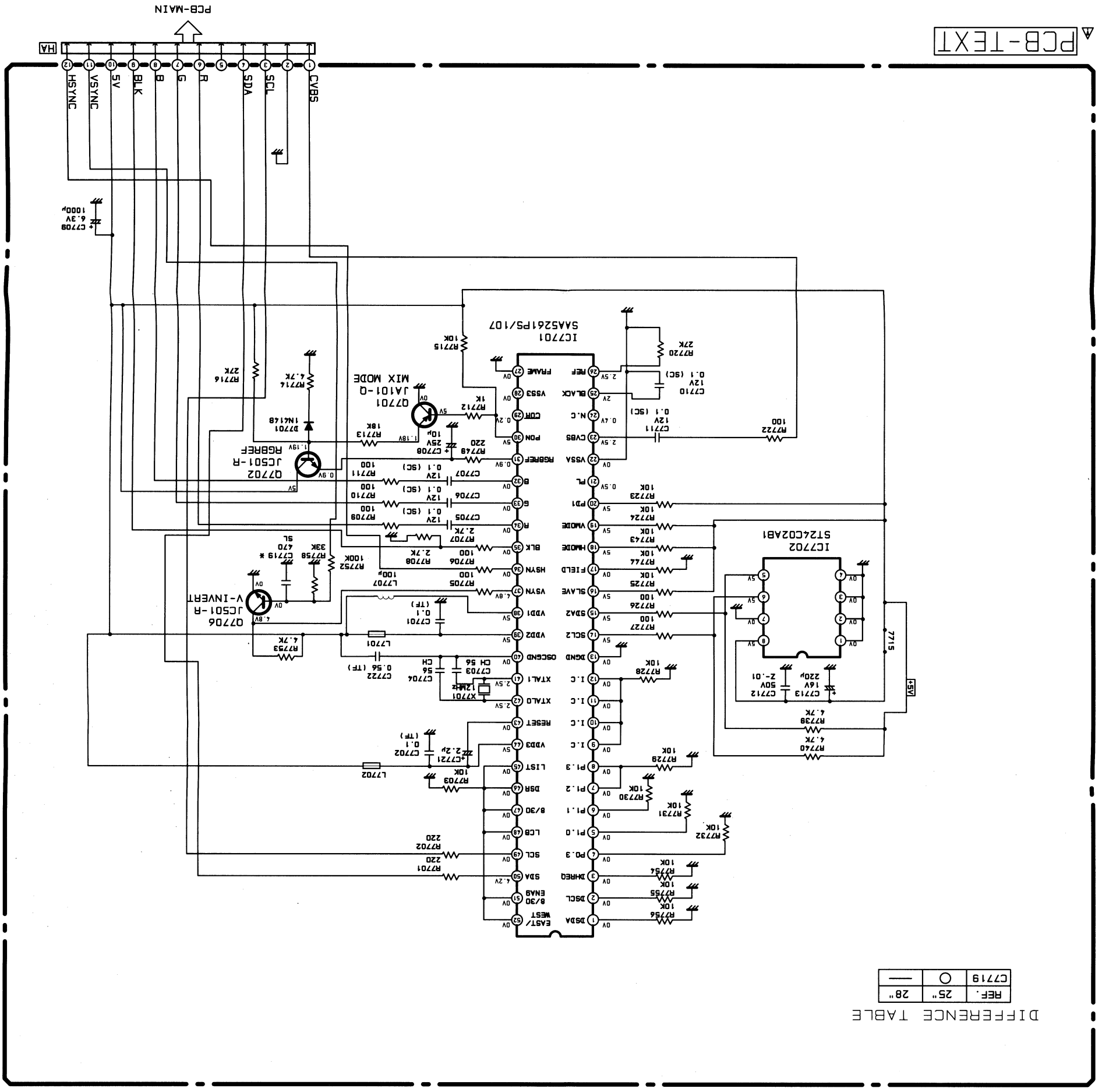
PCB-MAIN

DE

DS

SP393

⚠ PCB-AUD-PWR 28" ONLY



C25S7B	C28S7B
C25C7B	C28C7B
C25S7L	C28S7L

MITSUBISHI ELECTRIC

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